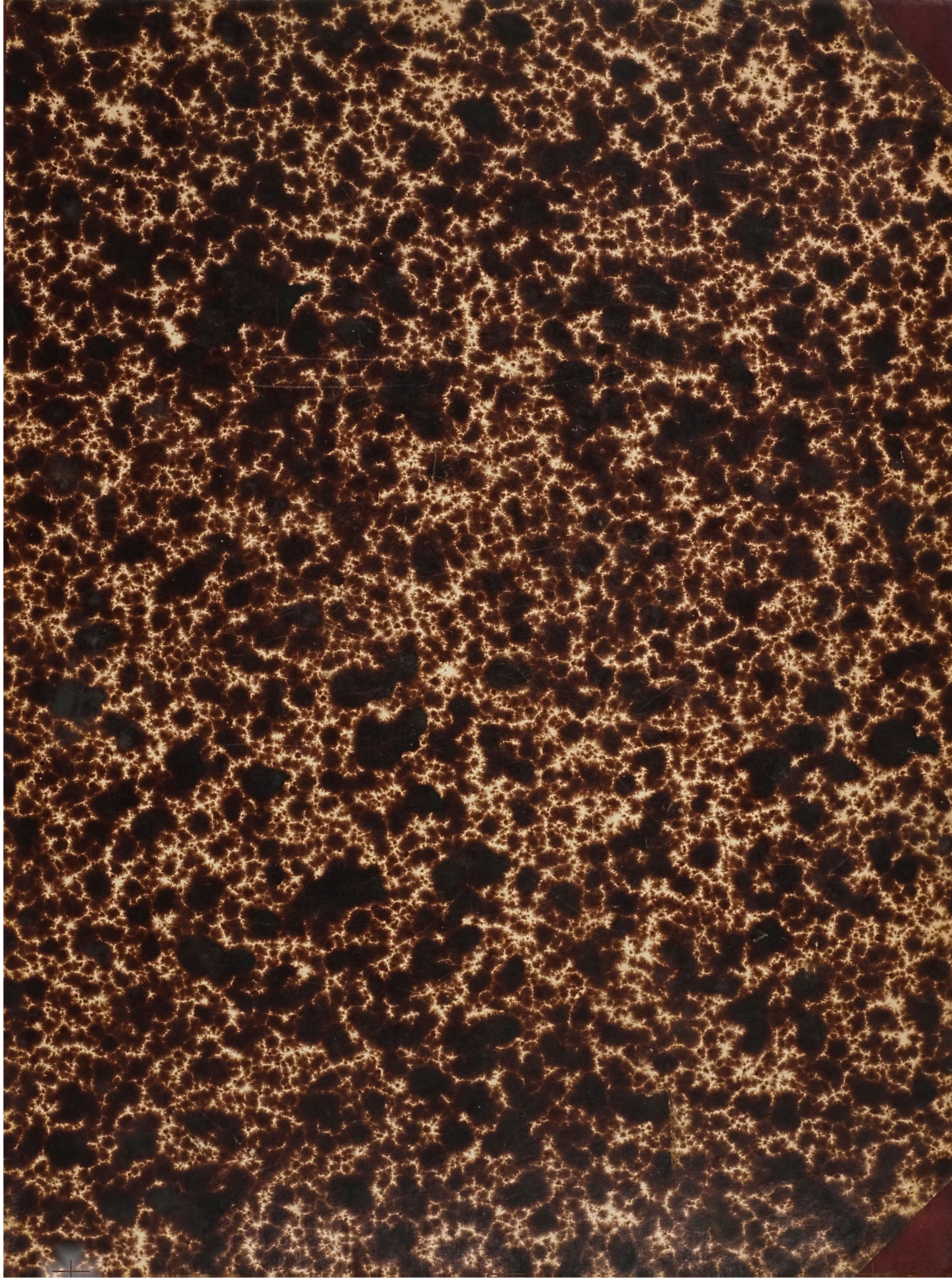




Eph. Astr.

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Annals

ANNALS
OF
THE ASTRONOMICAL OBSERVATORY OF HARVARD COLLEGE.
VOL. XXXV.
JOURNAL OF THE ZONE OBSERVATIONS

OF STARS BETWEEN $49^{\circ} 50'$ and $55^{\circ} 10'$ OF NORTH DECLINATION IN 1855.0 AND OBSERVED WITH THE MERIDIAN
CIRCLE DURING THE YEARS 1870 TO 1875, UNDER THE DIRECTION OF

JOSEPH WINLOCK AND EDWARD C. PICKERING,

SUCCESSIVE DIRECTORS OF THE OBSERVATORY.

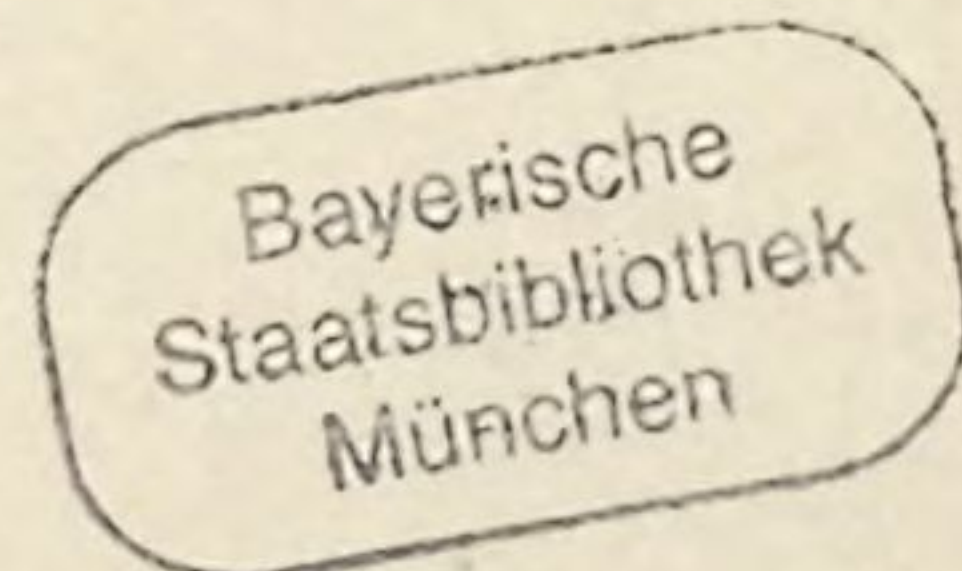
BY

WILLIAM A. ROGERS,

FORMERLY ASSISTANT PROFESSOR OF ASTRONOMY IN THE OBSERVATORY AND NOW PROFESSOR OF PHYSICS AND
ASTRONOMY IN COLBY UNIVERSITY.

PRINTED FROM FUNDS RESULTING FROM THE WILL OF
JOSIAH QUINCY, JUN.,
WHO DIED IN APRIL, 1775, LEAVING A NAME INSEPARABLY CONNECTED WITH THE HISTORY OF
THE AMERICAN REVOLUTION.

WATERVILLE, ME. :
PRINTED AT THE OFFICE OF THE WATERVILLE MAIL,
1894.



PREFACE.

The present volume contains the first portion of the Journal of the Observations made by Professor William A. Rogers at this Observatory, to determine the places of stars in the zone between the limits of north declination $49^{\circ} 50'$ and $55^{\circ} 10'$. The catalogue resulting from these observations has already been published in Volume XV of these Annals, and the discussion of proper motions derived from the work forms Volume XXV of the same series.

EDWARD C. PICKERING,

Director of the Observatory of Harvard College.

CAMBRIDGE, U. S., *August 1, 1894.*

JOURNAL OF ZONE OBSERVATIONS.

ZONE 1. NOVEMBER 10, 1870.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	° "	"	m s	"	s	"	h m s	° ' "
23 0 56.0	..	3 44.44	3 28.0	25 57.70	+12.80	-2 6.23	+ 8.90	-2.33	-27.46	23 1 49.16	50 56 29.6
23 2 26.0	..	5 14.99	5 3.0	59 32.40	+ 9.37	-2 6.23	+ 9.46	-2.35	-27.42	23 3 19.79	50 22 52.2
23 5 23.5	..	8 14.16	7 58.8	20 52.75	+11.87	-2 6.23	+ 9.63	-2.40	-27.41	23 6 18.97	51 1 32.9
23 6 55.8	..	9 45.08	9 28.2	31 17.80	+13.08	-2 6.23	+ 9.81	-2.40	-27.38	23 7 49.95	50 51 11.4
23 13 53.8	..	16 44.46	16 27.8	33 28.25	+12.92	-2 6.23	+ 9.85	-2.50	-27.17	23 14 49.48	50 49 1.7
23 16 3.9	..	18 53.51	18 38.5	0 44.05	+11.72	-2 6.23	+ 8.78	-2.51	-27.05	23 16 58.62	50 21 43.9
23 18 16.6	..	21 6.79	20 45.2	3 56.50	+16.90	-2 6.23	+ 9.22	-2.53	-26.95	23 19 11.96	50 18 37.4
23 20 4.4	..	22 55.21	22 38.4	19 58.00	+13.22	-2 6.23	+ 9.15	-2.55	-26.90	23 21 0.43	50 2 32.3
23 21 43.8	..	24 34.37	24 26.0	59 35.90	+ 6.56	-2 6.24	+ 9.46	-2.57	-26.83	23 22 39.60	50 22 48.3
23 23 2.5	..	25 53.12	25 44.0	17 7.50	+ 7.15	-2 6.24	+ 8.77	-2.58	-26.76	23 23 58.40	50 5 16.7
23 24 44.5	..	27 35.74	27 20.3	58 18.55	+12.03	-2 6.24	+ 9.33	-2.61	-26.74	23 25 41.04	50 24 11.2
23 26 30.2	..	29 21.18	29 7.0	13 42.50	+11.15	-2 6.24	+ 9.08	-2.62	-26.64	23 27 26.54	50 8 46.4
23 30 48.8	..	33 40.84	33 22.7	20 49.20	+14.25	-2 6.24	+ 8.42	-2.67	-26.46	23 31 46.30	50 1 42.5
23 32 32.0	..	35 23.61	35 6.3	43 46.60	+13.44	-2 6.24	+ 9.65	-2.71	-26.48	23 33 29.08	50 38 45.6
23 34 11.7	..	37 3.54	36 45.5	23 2.10	+13.88	-2 6.23	+ 9.94	-2.74	-26.47	23 35 9.03	50 59 31.0
23 34 48.0	..	37 40.52	37 32.8	22 5.00	+ 5.94	-2 6.24	+ 9.87	-2.76	-26.38	23 35 46.00	51 0 20.2
23 36 34.0	..	39 26.70	39 10.2	48 12.00	+12.84	-2 6.24	+ 9.45	-2.75	-26.33	23 37 32.27	50 34 19.8
23 39 56.0	..	42 49.16	42 27.1	30 52.00	+17.09	-2 6.24	+ 9.38	-2.79	-26.20	23 40 54.81	50 51 44.2
23 41 44.5	..	44 37.31	44 19.0	14 43.95	+14.07	-2 6.23	+10.02	-2.82	-26.17	23 42 42.99	51 7 50.0
23 45 56.8	..	48 50.26	48 33.1	16 8.30	+13.51	-2 6.24	+ 8.57	-2.82	-26.00	23 46 56.10	50 6 23.9
23 50 44.5	..	53 38.74	53 22.8	14 6.70	+12.48	-2 6.24	+ 9.11	-2.89	-25.70	23 51 44.67	50 8 25.4
23 52 11.4	..	55 5.82	54 52.5	14 18.50	+10.45	-2 6.25	+ 9.17	-2.92	-25.50	23 53 11.77	50 8 11.9
23 52 50.2	..	55 44.34	55 36.5	16 46.45	+ 6.13	-2 6.25	+ 8.73	-2.91	-25.50	23 53 50.32	50 5 39.2
23 55 15.5	..	58 10.05	57 48.1	.....	.....	-2 6.25	.....	-2.96	.....	23 56 16.06	.....
23 57 13.4	..	0 8.38	59 54.0	2 37.85	+11.26	-2 6.25	+ 9.15	-2.99	-25.40	23 58 14.44	50 19 53.4
0 0 18.7	..	3 14.96	2 52.3	51 58.40	+17.69	-2 6.25	+ 9.29	-3.01	-25.20	0 1 21.10	50 30 39.7
0 1 40.0	..	4 35.70	4 23.4	14 29.00	+ 9.66	-2 6.25	+ 8.87	-3.01	-25.10	0 2 41.89	50 8 0.7
0 2 34.5	..	5 29.81	5 20.2	15 49.65	+ 7.54	-2 6.25	+ 8.93	-3.02	-25.10	0 3 36.02	50 6 38.0
0 3 48.3	..	6 43.62	6 33.1	13 36.95	+ 8.08	-2 6.25	+ 9.09	-3.03	-25.00	0 4 49.87	50 8 51.5
0 5 16.9	..	8 13.02	7 52.2	35 18.50	+16.11	-2 6.25	+ 9.20	-3.06	-25.00	0 6 19.29	50 47 18.1
0 7 4.8	..	10 0.50	9 42.2	27 15.95	+14.13	-2 6.24	+ 9.71	-3.08	-24.90	0 8 6.82	50 55 19.2
0 11 17.7	..	14 14.39	14 8.2	22 25.85	+ 4.88	-2 6.25	+ 8.76	-3.10	-24.50	0 12 20.82	49 59 59.5
0 12 35.2	..	15 32.34	15 13.4	23 57.60	+14.89	-2 6.25	+ 8.93	-3.11	-24.50	0 13 38.80	49 58 37.8
0 15 26.8	..	18 23.53	18 4.5	18 8.45	+14.62	-2 6.25	+10.09	-3.15	-24.40	0 16 30.08	50 4 27.9
0 17 31.9	..	20 28.77	20 13.5	29 52.25	+11.89	-2 6.25	+10.10	-3.19	-24.30	0 18 35.34	50 52 41.4
0 19 51.6	..	22 48.58	22 31.0	36 15.50	+13.63	-2 6.25	+ 9.36	-3.21	-23.80	0 20 55.22	50 46 19.6
0 21 21.6	..	24 19.60	24 2.3	46 6.05	+13.45	-2 6.26	+ 9.16	-3.22	-24.00	0 22 26.26	50 36 28.4

ZONE 2, NOVEMBER 13, 1870.

23 4 40.4	8.0	7 30.89	7 22.5	28 41.85	+ 6.51	-2 7.59	+ 9.24	-2.31	-27.75	23 5 34.41	50 53 44.8
23 14 59.4	8.2	17 50.92	17 35.5	46 35.30	+11.98	-2 7.61	+ 8.77	-2.44	-27.50	23 15 54.67	50 35 57.5
23 16 3.9	7.5	18 54.97	18 48.0	0 43.25	+ 5.46	-2 7.61	+ 8.51	-2.45	-27.43	23 16 58.76	50 21 42.9
23 18 16.6	8.8	21 8.45	20 52.7	3 52.60	+12.28	-2 7.61	+ 8.76	-2.47	-27.38	23 19 12.30	50 18 40.9
23 20 4.4	9.0	22 57.01	22 42.8	19 59.20	+11.17	-2 7.61	+ 7.88	-2.49	-27.24	23 21 0.91	50 2 32.6
23 21 43.8	8.5	24 36.05	24 21.5	59 41.65	+11.33	-2 7.61	+ 8.96	-2.51	-27.23	23 22 39.97	50 22 51.5
23 24 26.7	8.6	27 19.08	27 2.7	16 45.55	+12.89	-2 7.61	+ 8.22	-2.54	-27.09	23 25 23.09	50 5 48.7
23 25 41.6	8.4	28 34.81	28 22.3	4 15.15	+ 9.78	-2 7.61	+ 8.81	-2.56	-27.09	23 26 38.83	50 18 16.7
23 27 8.4	8.2	30 1.53	29 48.7	28 52.00	+ 9.89	-2 7.60	+ 9.48	-2.59	-27.11	23 28 5.54	50 53 40.7

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R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
23 28 45.9	8.0	31 39.18	31 27.2	48 10.45	+ 9.34	-2 7.61	+ 8.98	-2.60	-27.00	23 29 43.25	50 34 21.4
23 31 49.7	9.0	34 44.04	34 30.4	32 48.20	+10.52	-2 7.60	+ 9.24	-2.64	-26.93	23 32 48.11	50 49 45.3
23 33 3.2	8.9	35 56.44	35 46.0	30 36.50	+ 8.04	-2 7.60	+ 8.95	-2.66	-26.89	23 34 0.60	50 51 54.4
23 34 48.0	9.2	37 41.92	37 23.0	22 15.75	+14.57	-2 7.60	+ 9.30	-2.68	-26.88	23 35 46.12	50 0 22.1
23 38 56.4	7.2	41 50.10	41 40.0	24 23.25	+ 7.96	-2 7.61	+ 8.57	-2.69	-26.59	23 39 54.46	49 58 7.7
23 40 7.8	9.0	43 1.83	42 53.8	10 6.75	+ 6.27	-2 7.61	+ 8.14	-2.72	-26.55	23 41 6.20	50 12 22.2
23 43 9.2	6.5	46 3.80	45 46.7	26 57.20	+13.18	-2 7.60	+ 9.44	-2.77	-26.53	23 44 8.21	50 55 40.1
23 44 18.9	8.7	47 13.84	46 58.0	33 5.40	+12.23	-2 7.60	+ 9.40	-2.78	-26.46	23 45 18.29	50 49 31.0
23 45 56.8	9.2	48 51.74	48 37.3	16 8.05	+11.31	-2 7.61	+ 9.15	-2.78	-26.30	23 46 56.25	50 6 27.4
23 48 2.1	8.4	50 57.26	50 41.0	20 44.70	+12.56	-2 7.60	+ 9.10	-2.83	-26.30	23 49 1.79	50 1 52.0
23 52 11.4	7.0	55 7.16	54 54.8	14 20.50	+ 9.74	-2 7.61	+ 8.65	-2.85	-26.00	23 53 11.82	50 8 13.2
23 53 28.5	9.2	56 23.87	56 11.5	15 27.10	+ 9.74	-2 7.61	+ 8.05	-2.87	-26.00	23 54 28.55	50 7 6.1
23 55 15.4	9.0	58 11.57	57 53.3	20 28.70	+14.40	-2 7.61	+ 7.93	-2.88	-25.90	23 56 16.30	50 2 9.1
23 57 13.4	8.8	0 10.20	59 53.2	2 41.55	+13.30	-2 7.61	+ 8.63	-2.91	-25.90	23 58 14.98	50 19 55.9
23 58 44.6	8.5	1 40.68	1 27.0	42 15.45	+10.64	-2 7.61	+ 8.93	-2.93	-25.90	23 59 45.48	50 40 19.6
0 0 18.7	9.0	3 15.98	2 57.5	51 58.70	+14.41	-2 7.61	+ 8.70	-2.95	-25.70	0 1 20.82	50 30 40.1
0 2 20.1	8.2	5 17.44	5 0.2	38 59.05	+13.34	-2 7.60	+ 9.23	-2.97	-25.70	0 3 22.35	50 43 39.2
0 3 48.3	8.9	6 45.12	6 33.0	13 41.75	+ 9.50	-2 7.62	+ 8.58	-2.98	-25.60	0 4 50.04	50 8 52.1
0 5 16.9	8.0	8 14.48	8 4.0	35 11.95	+ 8.13	-2 7.61	+ 8.76	-3.02	-25.60	0 6 19.43	50 47 20.7
0 7 8.9	9.0	10 6.63	9 50.0	28 31.15	+12.82	-2 7.61	+ 9.38	-3.04	-25.40	0 8 11.63	50 54 7.0
0 10 3.2	6.4	13 1.01	12 50.8	38 12.95	+ 7.91	-2 7.62	+ 9.29	-3.07	-25.20	0 11 6.07	50 44 20.4
0 12 8.4	8.0	15 5.92	14 51.4	19 13.75	+11.40	-2 7.62	+ 8.56	-3.06	-25.10	0 13 11.05	49 3 22.4
0 15 26.8	8.0	18 24.93	18 14.8	18 2.55	+ 7.94	-2 7.62	+ 8.42	-3.10	-24.90	0 16 30.16	51 4 30.1
0 18 31.9	7.8	21 29.66	21 19.2	47 15.65	+ 8.17	-2 7.62	+ 8.86	-3.16	-24.80	0 19 34.93	50 35 17.6
0 20 3.0	9.0	23 2.21	22 52.0	9 10.25	+ 7.99	-2 7.62	+ 8.75	-3.15	-24.60	0 21 7.53	50 13 22.9
0 21 21.6	8.8	24 21.08	24 8.7	46 6.35	+ 9.64	-2 7.62	+ 8.61	-3.18	-24.60	0 22 26.42	50 36 28.3
ZONE 3, NOVEMBER 15, 1870.											
23 14 59.4	8.5	17 51.92	17 35.2	40 29.50	+12.99	-2 8.25	+ 8.89	-2.39	-27.70	23 15 55.08	50 35 57.8
23 18 26.7	9.0	21 19.16	21 5.8	31 8.70	+10.38	-2 8.25	+ 9.16	-2.43	-27.70	23 19 22.40	50 45 16.6
23 22 40.8	8.2	25 34.56	25 22.3	35 54.70	+ 9.55	-2 8.25	+ 9.08	-2.48	-27.50	23 23 37.89	50 40 30.1
23 25 41.6	9.2	28 25.36	28 23.1	.....	.....	-2 8.25	.....	-2.52	.....	23 26 38.77	.....
23 28 56.4	9.0	31 50.41	31 38.7	.....	.....	-2 8.24	.....	-2.57	.....	23 29 53.88	.....
23 31 49.7	9.2	34 44.28	34 35.0	26 39.05	+ 7.20	-2 8.24	+ 9.40	-2.60	-27.20	23 32 47.82	50 49 44.6
23 33 3.2	9.2	35 57.22	35 48.0	24 30.85	+ 7.14	-2 8.25	+ 9.62	-2.61	-27.20	23 34 0.78	50 51 53.1
23 34 11.7	8.5	37 5.72	36 53.8	16 26.40	+ 9.17	-2 8.25	+ 9.54	-2.63	-27.20	23 35 9.30	50 59 59.5
23 55 15.5	9.0	58 11.92	.....	.....	.....	-2 8.26	.....	-2.92	.....	23 56 15.96	.....
ZONE 4, NOVEMBER 16, 1870.											
0 10 3.2	7.0	13 1.61	12 49.0	32 5.45	+ 9.77	-2 8.28	+ 9.36	-3.02	-25.70	0 11 6.06	50 44 20.1
0 12 8.4	8.8	15 6.30	14 57.0	13 0.20	+ 7.31	-2 8.29	+ 8.71	-3.02	-25.50	0 13 10.80	49 3 22.4
0 15 26.8	8.6	18 25.49	18 14.7	11 52.75	+ 8.31	-2 8.28	+ 9.78	-3.08	-25.50	0 16 30.08	51 4 31.8
0 20 3.0	9.0	23 2.87	22 47.0	3 5.45	+12.46	-2 8.29	+ 8.88	-3.11	-25.10	0 21 7.56	50 13 22.6
0 21 21.6	9.0	24 21.82	24 7.0	39 56.80	+11.51	-2 8.28	+ 8.94	-3.13	-25.10	0 22 26.55	50 36 30.3
0 24 34.7	7.8	27 34.92	27 24.5	14 6.80	+ 8.01	-2 8.28	+10.01	-3.18	-25.00	0 25 39.73	51 2 17.8
0 26 14.1	8.8	29 13.59	29 1.5	57 56.25	+ 9.47	-2 8.29	+ 8.98	-3.17	-24.80	0 27 18.44	50 18 28.9
0 29 3.0	9.2	32 3.33	31 53.0	16 4.55	+ 8.11	-2 8.29	+ 8.44	-3.19	-24.60	0 30 8.25	50 0 18.7
0 30 23.9	8.0	33 24.14	33 14.3	41 29.85	+ 7.62	-2 8.28	+ 9.13	-3.23	-24.60	0 31 29.10	50 34 53.6
0 31 54.7	9.1	34 55.28	34 42.6	11 41.90	+ 9.98	-2 8.29	+ 8.56	-3.23	-24.40	0 33 0.26	50 4 43.4
0 32 52.0	8.7	35 52.47	35 42.0	58 22.40	+ 8.22	-2 8.29	+ 9.09	-3.25	-24.30	0 33 57.47	50 18 1.7
0 35 26.2	8.2	38 27.56	38 17.6	10 38.95	+ 7.69	-2 8.29	+ 8.46	-3.26	-24.20	0 36 32.68	50 5 43.9

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R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
0 38 8.0	9.0	41 9.45	40 55.9	24 52.15	+10.50	-2 8.28	+ 9.99	-3.32	-24.20	0 39 14.60	50 51 34.9
0 39 48.7	8.3	42 49.92	42 39.0	30 38.86	+ 8.44	-2 8.28	+ 9.24	-3.33	-24.00	0 40 55.12	50 45 45.4
0 39 48.7	9.0	42 49.98	42 41.0	30 38.95	+ 5.80	-2 8.28	+ 9.22	-3.33	-24.00	0 40 55.18	50 45 42.6
0 41 50.1	8.9	44 52.66	44 42.6	44 22.00	+ 7.87	-2 8.28	+ 9.46	-3.35	-23.90	0 42 57.89	50 32 1.9
0 43 25.1	8.5	46 28.10	46 18.1	45 11.45	+ 7.79	-2 8.29	+ 8.91	-3.36	-23.80	0 44 33.37	50 31 11.8
0 44 58.2	8.6	48 0.67	47 46.5	5 13.00	+11.14	-2 8.29	+ 8.48	-3.36	-23.70	0 46 5.97	50 11 13.1
0 45 59.7	9.3	49 2.12	48 49.5	7 27.85	+ 9.89	-2 8.29	+ 8.74	-3.37	-23.60	0 47 7.45	50 8 57.3
0 48 38.2	8.3	51 41.87	51 51.5	32 58.75	+ 7.44	-2 8.28	+ 9.50	-3.42	-23.50	0 49 47.28	50 43 24.5
0 50 32.0	8.9	53 35.03	53 23.6	15 42.75	+ 8.98	-2 8.29	+ 8.39	-3.41	-23.30	0 51 40.46	50 0 41.0
0 51 57.7	8.4	55 2.04	54 50.8	20 21.15	+ 8.64	-2 8.28	+ 9.44	-3.46	-23.30	0 53 7.54	50 56 3.2
0 53 24.5	8.4	56 28.19	56 16.6	54 2.40	+ 9.06	-2 8.29	+ 9.17	-3.45	-23.10	0 54 33.70	50 22 22.1
0 55 13.9	9.0	58 17.52	57 59.8	47 35.90	+13.79	-2 8.29	+ 9.15	-3.47	-23.00	0 56 23.08	50 28 53.2
ZONE 5, NOVEMBER 17, 1870.											
23 2 26.0	9.2	5 17.07	5 6.5	53 27.25	+ 8.28	-2 8.38	+ 9.18	-2.19	-28.10	23 3 19.88	50 22 52.9
23 4 16.5	8.5	7 7.45	6 55.6	28 12.35	+ 9.21	-2 8.37	+ 9.65	-2.21	-28.10	23 5 10.29	50 48 9.4
23 6 55.8	9.5	9 47.27	9 32.2	25 13.75	+11.68	-2 8.37	+ 9.32	-2.24	-28.10	23 7 50.16	50 51 10.5
23 7 55.2	8.7	10 46.68	10 36.0	26 18.90	+ 8.28	-2 8.37	+ 9.47	-2.26	-28.10	23 8 49.55	50 50 2.2
23 9 24.0	9.5	12 15.50	12 2.2	6 18.85	+10.44	-2 8.38	+ 8.63	-2.27	-28.00	23 10 18.48	50 10 3.7
23 10 45.9	8.3	13 37.50	13 26.0	7 42.80	+ 9.03	-2 8.38	+ 8.80	-2.28	-28.00	23 11 40.52	50 8 38.7
23 12 6.7	9.3	14 58.54	14 45.0	34 32.70	+10.48	-2 8.37	+ 9.64	-2.31	-28.00	23 13 1.56	50 41 51.2
23 13 53.8	9.0	16 46.48	16 30.7	27 22.50	+12.23	-2 8.37	+ 9.54	-2.33	-28.00	23 14 49.53	50 49 2.2
23 14 59.4	8.0	17 51.70	17 45.5	40 23.30	+ 4.82	-2 8.37	+ 9.08	-2.34	-27.90	23 15 54.77	50 35 54.7
23 16 35.7	9.0	19 27.81	19 14.6	4 30.70	+10.35	-2 8.38	+ 9.05	-2.36	-27.80	23 17 30.95	50 11 53.1
23 23 2.5	8.7	25 55.32	25 44.3	11 3.65	+ 8.64	-2 8.38	+ 8.53	-2.44	-27.60	23 23 58.60	50 5 18.6
23 24 26.7	8.0	27 19.74	27 6.5	10 37.35	+10.37	-2 8.38	+ 8.47	-2.45	-27.60	23 25 23.07	50 5 46.6
23 25 41.6	8.4	28 35.37	28 24.0	58 10.15	+ 8.92	-2 8.38	+ 9.07	-2.47	-27.60	23 26 38.71	50 18 13.1
23 27 5.3	9.5	29 59.19	29 49.0	41 1.75	+ 7.93	-2 8.37	+ 9.11	-2.49	-27.60	23 28 2.55	50 35 20.6
23 28 45.9	7.7	31 39.84	31 35.5	41 59.90	+ 3.34	-2 8.36	+ 9.23	-2.51	-27.50	23 29 43.25	50 34 18.2
23 30 24.9	9.0	33 18.63	33 3.6	0 12.85	+11.74	-2 8.37	+ 8.59	-2.52	-27.40	23 31 22.10	50 16 13.2
23 31 49.7	9.0	34 44.44	34 28.8	26 44.50	+12.07	-2 8.36	+ 9.47	-2.55	-27.40	23 32 47.91	50 49 42.8
23 33 3.2	8.9	35 57.16	35 44.5	24 32.65	+ 9.82	-2 8.36	+ 9.86	-2.57	-27.40	23 34 0.65	50 51 52.9
23 34 11.7	8.5	37 5.80	36 57.0	16 51.95	+ 6.79	-2 8.36	+ 9.74	-2.58	-27.40	23 35 9.32	50 59 30.5
23 35 37.8	8.0	38 31.29	38 16.9	32 25.95	+11.17	-2 8.36	+ 9.43	-2.60	-27.30	23 36 34.85	50 44 0.7
23 37 57.2	9.0	40 53.10	40 40.0	11 37.50	+10.30	-2 8.37	+ 8.57	-2.61	-27.20	23 38 56.74	50 4 47.6
23 39 4.6	8.4	41 59.10	41 52.1	10 47.10	+ 5.50	-2 8.37	+ 8.53	-2.63	-27.10	23 40 2.76	50 5 33.4
23 44 18.9	8.8	47 14.56	47 1.6	26 56.15	+10.06	-2 8.36	+ 9.52	-2.70	-27.00	23 45 18.33	50 49 30.1
23 45 56.8	9.5	48 52.44	48 38.8	10 2.45	+10.68	-2 8.37	+ 8.41	-2.71	-26.80	23 46 56.26	50 6 23.6
23 48 2.1	8.8	50 57.92	50 40.6	14 41.65	+13.33	-2 8.36	+10.04	-2.76	-26.90	23 49 1.76	50 1 48.6
23 49 18.8	9.0	52 15.00	52 2.0	28 39.70	+10.07	-2 8.36	+ 9.70	-2.76	-26.80	23 50 18.89	50 47 47.1
23 51 3.6	7.0	54 0.16	53 54.2	34 51.40	+ 4.66	-2 8.36	+ 9.73	-2.78	-26.70	23 52 4.09	50 41 30.1
23 52 49.2	9.0	55 46.22	55 33.6	41 12.60	+ 9.80	-2 8.36	+ 9.11	-2.80	-26.70	23 53 50.20	50 35 13.5
23 53 31.2	8.5	56 27.19	56 22.3	17 28.10	+ 3.78	-2 8.36	+ 9.80	-2.82	-26.70	23 54 31.17	50 58 52.6
23 55 15.5	8.2	58 12.08	58 00.0	29 53.50	+ 9.37	-2 8.36	+ 9.84	-2.83	-26.60	23 56 16.11	50 46 33.0
23 57 18.1	8.9	0 14.96	59 59.6	26 14.15	+11.91	-2 8.35	+ 9.42	-2.86	-26.50	23 58 19.05	50 50 14.6
23 58 44.6	8.8	1 41.46	1 29.6	36 7.95	+ 9.24	-2 8.35	+ 9.20	-2.87	-26.40	23 59 45.58	50 40 18.0
0 0 18.7	9.0	3 16.98	3 1.0	45 50.50	+12.47	-2 8.35	+ 8.98	-2.88	-26.30	0 1 21.15	50 30 38.5
0 1 40.0	8.8	4 37.94	4 25.5	8 27.55	+ 9.74	-2 8.36	+ 8.87	-2.88	-26.20	0 2 42.15	50 7 58.7
0 3 48.3	8.8	6 45.82	6 31.9	7 37.50	+10.91	-2 8.36	+ 8.77	-2.92	-26.10	0 4 50.06	50 8 49.9
0 10 3.2	7.0	13 1.73	12 50.6	32 8.90	+ 8.60	-2 8.35	+ 9.41	-3.00	-25.90	0 11 6.13	50 44 17.0
0 12 8.4	8.8	15 6.40	14 53.5	13 6.50	+10.15	-2 8.36	+ 8.73	-3.00	-25.70	0 13 10.85	50 3 20.4
0 15 26.8	8.2	18 25.59	18 14.8	11 57.65	+ 8.31	-2 8.35	+ 9.82	-3.07	-25.60	0 16 30.12	51 4 28.5
0 18 27.1	8.9	21 26.89	21 11.1	54 11.15	+12.34	-2 8.36	+ 9.21	-3.08	-25.40	0 19 31.49	50 22 18.5

JOURNAL OF ZONE OBSERVATIONS.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	° "	"	m s	"	s	"	h m s	° ' "
0 20 3.0	....	23 2.93	22 49.5	3 7.00	+10.50	-2 8.36	+ 8.89	-3.09	-25.30	0 21 7.57	50 13 20.6
0 21 21.6	8.9	24 21.91	24 9.7	40 0.05	+ 9.56	-2 8.36	+ 9.04	-3.11	-25.20	0 22 26.58	50 36 26.8
0 24 34.7	7.8	27 34.88	27 25.1	14 9.80	+ 7.55	-2 8.35	+ 9.79	-3.17	-25.10	0 25 39.63	50 2 15.7
0 26 14.1	8.9	29 13.71	29 1.0	58 2.15	+ 9.94	-2 8.36	+ 9.04	-3.17	-24.90	0 27 18.49	50 18 25.1
0 27 41.3	9.5	30 41.30	30 26.5	7 9.80	+11.62	-2 8.36	+ 8.71	-3.18	-24.80	0 28 46.12	50 9 18.8
0 29 3.0	9.3	32 3.39	31 47.9	16 13.25	+12.20	-2 8.36	+ 8.45	-3.19	-24.80	0 30 8.24	50 0 15.6
0 30 23.9	8.0	33 24.22	33 14.0	41 33.85	+ 7.94	-2 8.35	+ 9.18	-3.23	-24.80	0 31 29.11	50 34 51.4
0 31 54.7	9.0	34 55.40	34 40.0	11 47.25	+12.11	-2 8.36	+ 8.59	-3.23	-24.60	0 33 0.31	50 4 41.7
0 32 52.0	8.7	35 52.57	35 43.5	58 25.65	+ 7.10	-2 8.34	+ 9.27	-3.25	-24.60	0 33 57.52	50 17 58.9
0 35 26.2	8.4	38 27.48	38 17.9	10 42.60	+ 7.39	-2 8.34	+ 9.68	-3.30	-24.50	0 36 32.51	51 5 42.6
0 36 17.0	9.5	39 19.82	39 10.6	1 39.65	+ 7.21	-2 8.35	+ 8.79	-3.28	-24.40	0 37 24.85	50 14 44.5
0 38 8.0	9.1	41 9.75	40 59.5	24 54.60	+ 7.89	-2 8.34	+ 9.93	-3.32	-24.30	0 39 14.84	50 51 31.3
0 39 48.7	8.0	42 50.06	42 39.1	30 43.55	+ 8.52	-2 8.34	+ 9.27	-3.32	-24.20	0 40 55.21	50 45 42.3
0 39 48.7	....	42 50.10	42 40.7	30 43.55	+ 7.28	-2 8.34	+ 9.27	-3.32	-24.20	0 40 55.25	50 45 41.1
0 41 50.1	9.0	44 52.92	44 43.0	44 26.40	+ 7.71	-2 8.34	+ 9.47	-3.33	-24.10	0 42 58.11	50 31 58.8
0 43 25.1	8.5	46 28.10	46 16.6	45 17.15	+ 8.96	-2 8.34	+ 9.16	-3.35	-24.10	0 44 33.33	50 31 8.9
0 50 32.0	9.5	53 35.13	53 20.0	.....	.....	-2 8.35	.....	-3.40	.....	0 51 40.51	.....
0 51 57.7	8.4	55 2.14	55 46.9	.....	.....	-2 8.34	.....	-3.45	.....	0 53 7.59	.....
0 53 24.5	8.8	56 28.15	56 15.7	.....	.....	-2 8.35	.....	-3.44	.....	0 54 33.61	.....
0 53 54.2	7.8	56 57.29	56 54.7	.....	.....	-2 8.35	.....	-3.44	.....	0 55 2.77	.....
ZONE 6. NOVEMBER 19, 1870.											
2 38 30.2	8.5	41 45.05	41 34.2	53 53.95	+ 8.44	-2 8.58	+ 9.18	-4.23	-14.70	2 39 52.78	50 22 20.9
2 43 13.9	8.4	46 28.61	46 18.3	45 14.40	+ 8.02	-2 8.56	+ 8.89	-4.25	-14.30	2 44 36.49	50 30 58.8
2 45 22.7	8.2	48 37.26	48 33.0	42 5.60	+ 3.34	-2 8.56	+ 9.07	-4.27	-14.20	2 46 45.19	50 34 2.6
2 49 31.6	8.8	52 47.58	52 44.0	23 40.45	+ 2.78	-2 8.56	+ 9.71	-4.29	-13.70	2 50 55.66	50 52 27.0
2 53 44.5	8.6	57 0.74	56 51.2	48 11.50	+ 7.41	-2 8.55	+ 9.18	-4.31	-13.20	2 55 8.83	50 27 59.3
2 58 10.8	7.3	1 26.47	1 18.2	35 8.60	+ 6.44	-2 8.55	+ 9.05	-4.33	-12.80	2 59 34.70	50 41 0.2
3 20 39.4	7.5	23 56.67	23 48.5	13 2.15	+ 6.45	-2 8.55	+ 8.69	-4.41	-10.40	3 22 5.23	50 3 1.4
3 23 38.2	9.2	26 56.23	26 42.0	6 38.15	+11.22	-2 8.55	+ 8.60	-4.42	-10.00	3 25 4.86	50 9 29.5
3 30 50.6	7.9	34 8.07	34 0.0	51 16.65	+ 6.32	-2 8.53	+ 8.92	-4.44	- 9.30	3 32 16.93	50 24 44.6
3 34 4.4	7.6	37 22.71	37 11.2	7 21.85	+ 9.03	-2 8.53	+ 8.68	-4.44	- 8.80	3 35 31.58	50 8 41.2
3 37 39.5	6.5	40 56.95	40 49.1	55 10.15	+ 6.10	-2 8.54	+ 8.71	-4.46	- 8.50	3 39 5.89	50 20 49.0
3 40 25.3	9.2	43 46.66	43 30.8	17 29.35	+12.24	-2 8.53	+ 9.67	-4.48	- 8.20	3 41 55.80	50 58 36.3
3 44 3.3	8.4	47 22.63	47 12.6	17 37.40	+ 7.88	-2 8.53	+ 9.72	-4.49	- 7.80	3 45 31.60	49 58 23.0
3 46 32.6	9.2	49 52.83	49 40.5	46 34.95	+ 9.59	-2 8.52	+ 9.03	-4.48	- 7.50	3 48 1.98	50 29 25.8
3 49 2.4	9.4	52 23.22	52 16.5	43 52.75	+ 5.22	-2 8.52	+ 9.37	-4.49	- 7.30	3 50 32.42	50 32 3.3
3 52 20.7	8.5	55 40.35	55 27.8	0 48.55	+ 9.79	-2 8.53	+ 8.61	-4.49	- 6.90	3 53 49.53	50 15 10.4
3 54 47.2	8.6	58 6.97	57 55.3	51 3.90	+ 9.13	-2 8.53	+ 8.89	-4.50	- 6.60	3 56 16.23	50 24 54.1
4 0 12.2	8.4	3 32.21	3 20.3	17 19.40	+ 9.37	-2 8.52	+ 8.51	-4.49	- 6.20	4 1 41.48	49 58 36.8
4 3 2.9	8.1	6 22.87	6 11.7	6 37.70	+ 8.79	-2 8.52	+ 8.61	-4.50	- 5.80	4 4 32.22	50 9 17.3
4 5 24.9	8.8	8 45.29	8 30.7	50 48.15	+11.40	-2 8.51	+ 8.84	-4.51	- 5.50	4 6 54.74	50 25 9.1
ZONE 7. NOVEMBER 27, 1870.											
23 4 16.5	8.8	7 7.09	6 55.5	28 9.00	+ 8.98	-2 8.04	+ 9.21	-1.96	-28.80	23 5 10.51	50 48 10.7
23 6 55.8	9.2	9 46.62	9 33.5	25 8.75	+10.13	-2 8.04	+ 8.98	-2.00	-28.80	23 7 50.08	50 51 12.2
23 7 55.2	8.7	10 46.08	10 32.6	26 17.05	+10.44	-2 8.04	+ 9.07	-2.01	-28.70	23 8 49.53	50 50 4.5
23 9 24.0	9.5	12 15.04	12 2.4	6 12.75	+ 9.89	-2 8.05	+ 8.26	-2.03	-28.60	23 10 18.59	50 10 7.6
23 10 45.9	7.8	13 36.86	13 24.6	7 40.05	+ 9.66	-2 8.05	+ 8.39	-2.04	-28.60	23 11 40.45	50 8 40.4
23 12 6.7	9.0	14 58.00	14 42.7	34 30.15	+11.87	-2 8.04	+ 9.17	-2.07	-28.70	23 13 1.59	50 41 53.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
23 13 53.8	9.0	16 46.08	16 33.2	27 17.35	+ 9.98	-2 8.04	+ 9.15	-2.09	-28.70	23 14 49.70	50 49 4.4
23 14 59.4	8.0	17 51.16	17 37.8	40 24.55	+10.42	-2 8.04	+ 8.70	-2.10	-28.70	23 15 54.82	50 35 57.2
23 16 35.7	8.9	19 27.57	19 13.1	4 27.05	+11.37	-2 8.05	+ 8.60	-2.12	-28.60	23 17 31.28	50 11 55.8
23 18 16.6	8.9	22 8.45	21 52.5	57 44.05	+12.52	-2 8.05	+ 8.59	-2.15	-28.50	23 19 12.18	50 18 40.2
23 20 4.4	9.0	22 56.91	22 41.7	13 51.10	+11.96	-2 8.05	+ 8.36	-2.17	-28.50	23 21 0.69	50 2 32.5
23 21 43.8	8.8	24 36.15	24 19.2	53 34.35	+13.28	-2 8.04	+ 8.73	-2.19	-28.50	23 22 39.96	50 22 51.1
23 23 2.5	8.1	25 54.74	25 39.3	11 4.00	+12.10	-2 8.04	+ 8.19	-2.20	-28.40	23 23 58.60	51 5 19.9
23 24 26.7	7.9	27 19.16	27 5.7	10 33.55	+10.61	-2 8.04	+ 8.15	-2.22	-28.40	23 25 23.06	50 5 48.9
23 25 41.6	8.0	28 34.87	28 24.6	58 6.20	+ 8.06	-2 8.04	+ 8.66	-2.24	-28.40	23 26 38.78	50 18 14.3
23 27 5.3	9.5	29 58.48	29 44.8	41 0.05	+10.66	-2 8.03	+ 8.75	-2.26	-28.40	23 28 2.41	50 35 23.2
23 28 45.9	6.8	31 39.20	31 24.9	42 2.65	+11.13	-2 8.03	+ 8.82	-2.28	-28.40	23 29 43.17	50 34 21.2
23 30 24.9	8.9	33 18.25	33 2.1	0 10.40	+12.68	-2 8.04	+ 8.27	-2.30	-28.30	23 31 22.27	50 16 14.7
23 31 49.7	8.8	34 43.82	34 29.6	26 38.70	+10.99	-2 8.03	+ 9.37	-2.33	-28.40	23 32 47.84	50 49 45.8
23 33 3.2	8.9	35 56.52	35 41.9	24 31.90	+11.29	-2 8.03	+ 9.38	-2.34	-28.40	23 34 0.57	50 51 52.9
23 34 11.7	8.3	37 5.20	36 52.7	16 50.85	+ 9.64	-2 8.03	+ 9.31	-2.36	-28.40	23 35 9.27	50 59 32.4
23 35 37.8	7.2	38 30.73	38 16.7	32 21.45	+10.85	-2 8.03	+ 9.02	-2.37	-28.30	23 36 34.85	50 44 2.8
23 37 57.2	9.2	40 52.88	40 33.7	11 38.70	+15.10	-2 8.04	+ 8.17	-2.40	-28.10	23 38 57.06	50 4 49.3
23 39 4.6	7.9	41 58.48	41 46.7	10 46.45	+ 9.27	-2 8.04	+ 8.18	-2.41	-28.10	23 40 2.69	50 5 35.8
23 39 48.5	8.0	42 42.35	42 32.9	44 15.25	+ 7.32	-2 8.03	+ 9.01	-2.43	-28.10	23 40 46.57	50 32 5.8
23 43 9.2	6.5	46 3.84	45 50.9	20 44.90	+ 9.96	-2 8.03	+ 9.12	-2.47	-28.10	23 44 8.12	50 55 39.1
23 44 18.9	8.9	47 13.88	47 5.2	26 49.75	+ 6.73	-2 8.03	+ 9.14	-2.49	-28.00	23 45 18.19	50 49 31.1
23 45 56.8	9.3	48 51.84	48 36.9	9 59.00	+11.71	-2 8.04	+ 8.09	-2.49	-27.90	23 46 56.21	50 6 26.0
23 48 2.1	8.7	50 57.30	50 42.3	14 36.20	+11.56	-2 8.03	+ 9.57	-2.54	-28.00	23 49 1.69	51 1 50.0
23 49 18.8	8.9	52 14.55	51 58.6	28 35.95	+12.39	-2 8.03	+ 9.22	-2.55	-27.90	23 50 19.08	50 47 50.9
23 51 3.6	4.5	53 59.52	53 46.7	34 52.50	+ 9.93	-2 8.02	+ 9.22	-2.57	-27.90	23 52 4.00	50 41 31.9
23 52 49.2	8.4	55 45.42	55 31.9	41 8.45	+10.50	-2 8.02	+ 8.74	-2.59	-27.80	23 53 49.95	50 35 16.2
23 53 31.2	8.7	56 26.67	56 5.1	.....	.....	-2 8.02	.....	-2.61	.....	23 54 31.20	.....
23 55 15.5	8.0	58 11.32	58 0.5	29 46.65	+ 8.37	-2 8.02	+ 9.30	-2.62	-27.70	23 56 15.90	50 46 36.5
23 57 18.1	8.7	0 14.28	0 0.6	26 7.25	+10.60	-2 8.02	+ 9.05	-2.65	-27.70	23 58 18.91	50 50 17.9
23 58 44.6	9.5	1 40.88	1 27.7	36 4.60	+10.25	-2 8.02	+ 8.83	-2.66	-27.60	23 59 45.54	50 40 20.1
0 0 18.7	9.0	3 16.52	3 2.6	45 45.35	+10.83	-2 8.02	+ 8.65	-2.68	-27.50	0 1 21.22	50 30 39.8
0 1 40.0	8.8	4 37.34	4 22.0	8 24.55	+12.02	-2 8.03	+ 8.43	-2.69	-27.40	0 2 42.07	50 8 1.7
0 2 43.0	8.5	5 40.79	5 30.4	5 1.40	+ 8.16	-2 8.03	+ 8.20	-2.71	-27.40	0 3 45.53	50 11 20.8
0 5 16.9	7.8	8 14.54	8 2.7	29 2.15	+ 9.14	-2 8.02	+ 9.27	-2.75	-27.40	0 6 19.35	50 47 22.1
0 7 4.8	8.0	10 2.16	9 47.6	21 4.60	+11.27	-2 8.02	+ 9.17	-2.78	-27.30	0 8 7.00	50 55 21.7
0 10 3.2	6.3	13 1.15	12 51.8	32 2.95	+ 7.21	-2 8.02	+ 9.00	-2.81	-27.20	0 11 6.07	50 44 19.2
0 11 17.7	8.0	14 16.03	13 3.0	16 23.00	+10.24	-2 8.03	+ 9.18	-2.79	-27.10	0 12 20.96	50 0 2.4
0 12 8.4	8.2	15 5.91	14 55.5	13 0.40	+ 8.19	-2 8.03	+ 8.33	-2.82	-27.00	0 13 10.87	50 3 22.2
0 15 26.8	7.9	18 25.07	18 10.8	11 55.00	+11.01	-2 8.02	+ 9.35	-2.88	-27.00	0 16 30.12	51 4 31.3
0 18 27.1	8.2	21 26.49	21 6.1	54 11.15	+15.94	-2 8.03	+ 8.74	-2.90	-26.80	0 19 31.60	50 22 19.6
0 20 3.0	8.9	23 2.39	22 53.8	2 59.90	+ 6.74	-2 8.02	+ 8.53	-2.92	-26.70	0 21 7.54	50 13 21.5
0 21 21.6	8.5	24 21.28	24 6.2	39 59.40	+11.74	-2 8.02	+ 9.05	-2.94	-26.60	0 22 26.46	50 36 27.5
0 24 34.7	7.0	27 34.40	27 22.3	14 8.15	+ 9.32	-2 8.01	+ 9.54	-3.00	-26.60	0 25 39.66	51 2 16.7
0 26 14.1	8.5	28 13.29	28 56.0	58 1.40	+13.54	-2 8.02	+ 8.60	-2.98	-26.40	0 27 18.60	50 18 26.8
0 27 41.3	9.0	30 40.86	30 27.0	7 4.40	+10.91	-2 8.02	+ 8.34	-3.01	-26.30	0 28 46.19	50 9 21.0
0 29 3.0	9.0	32 2.91	31 47.8	16 9.35	+11.89	-2 8.02	+ 8.12	-3.02	-26.20	0 30 8.27	50 0 16.8
ZONE 8. DECEMBER 10, 1870.											
0 31 5.5	8.4	32 5.68	31 51.3	56 2.10	+11.26	-0 8.21	+ 8.88	-2.80	-27.40	0 32 11.15	50 20 25.9
0 32 15.4	9.5	33 15.30	33 1.5	8 7.80	+10.84	-0 8.21	+ 8.80	-2.80	-27.40	0 33 20.80	50 8 19.6
0 35 26.2	8.1	36 27.00	36 6.7	10 49.60	+15.62	-0 8.20	+ 8.58	-2.88	-27.40	0 36 32.59	51 5 42.1
0 44 58.2	8.8	46 0.35	45 44.0	5 16.30	+12.78	-0 8.21	+ 8.57	-2.97	-26.80	0 46 6.12	50 11 12.4
0 45 59.7	9.0	47 1.64	46 49.5	7 28.50	+ 9.50	-0 8.21	+ 8.77	-2.99	-26.70	0 47 7.43	50 8 57.1

JOURNAL OF ZONE OBSERVATIONS.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
0 48 38.2	8.4	49 41.37	49 24.0	33 5.60	+13.48	-0 8.20	+ 9.49	-3.03	-26.70	0 49 47.25	50 43 24.5
0 49 5.4	8.4	50 8.20	50 31.1	31 23.05	-17.75	-0 8.20	+ 9.26	-3.05	-26.70	0 50 14.09	50 44 35.6
0 51 3.8	8.9	52 6.16	51 49.4	50 22.85	+13.11	-0 8.20	+ 8.88	-3.05	-26.60	0 52 12.09	50 26 6.2
0 52 16.7	8.3	53 20.17	53 3.1	37 54.65	+13.29	-0 8.20	+ 9.36	-3.07	-26.50	0 53 26.13	50 38 35.0
0 53 54.2	6.9	54 56.77	54 37.1	54 48.45	+15.40	-0 8.19	+ 9.32	-3.08	-26.40	0 55 2.77	50 21 43.2
0 55 13.9	9.2	56 17.32	56 3.1	47 35.55	+11.07	-0 8.19	+ 9.18	-3.11	-26.40	0 56 23.34	50 28 51.4
0 58 30.9	8.0	59 33.47	59 16.1	21 28.05	+13.73	-0 8.20	+ 8.40	-3.12	-26.10	0 59 39.55	49 55 0.8
1 0 45.8	8.2	1 49.46	1 35.6	13 44.45	+10.94	-0 8.20	+ 8.76	-3.16	-26.00	1 1 55.58	50 2 41.8
1 1 58.7	9.5	3 3.95	2 46.3	16 1.75	+13.86	-0 8.20	+ 8.43	-3.17	-26.00	1 3 10.10	50 0 27.0
1 4 16.7	7.5	5 21.20	5 9.1	20 0.30	+ 9.34	-0 8.19	+ 9.50	-3.23	-26.00	1 5 27.45	50 56 24.7
1 6 48.6	8.5	7 52.68	7 36.5	11 42.80	+12.47	-0 8.19	+ 9.77	-3.27	-25.90	1 7 58.99	50 4 45.4
1 10 11.9	9.0	11 17.40	10 55.3	18 37.75	+17.05	-0 8.19	+ 9.78	-3.33	-25.70	1 11 23.76	50 57 54.8
1 11 56.6	7.9	13 1.36	12 44.0	20 11.95	+13.43	-0 8.19	+ 9.45	-3.32	-25.60	1 13 7.79	50 56 16.5
1 12 56.8	9.4	14 2.10	13 50.0	49 58.60	+ 9.44	-0 8.19	+ 8.89	-3.32	-25.40	1 14 8.51	50 26 25.3
1 14 57.6	9.5	16 3.38	15 46.0	20 49.85	+13.44	-0 8.19	+ 9.51	-3.36	-25.40	1 16 9.87	50 55 38.4
1 16 30.6	8.2	17 36.00	17 22.0	14 33.70	+10.79	-0 8.19	+10.03	-3.38	-25.40	1 17 42.53	51 1 52.2
1 18 9.1	9.5	19 16.09	19 0.0	32 22.00	+12.48	-0 8.19	+ 9.41	-3.39	-25.20	1 19 22.64	50 44 4.9
1 19 10.6	8.8	20 17.17	20 4.7	55 15.40	+ 9.77	-0 8.20	+ 8.82	-3.38	-25.00	1 20 23.71	50 21 8.3
1 20 9.1	8.3	21 14.24	21 8.7	14 5.30	+ 4.24	-0 8.19	+10.02	-3.42	-25.10	1 21 20.85	50 2 13.8
1 21 54.8	8.9	23 0.57	22 45.0	15 3.25	+12.28	-0 8.20	+ 8.36	-3.40	-24.80	1 23 7.15	50 1 22.3
1 23 38.0	9.0	24 44.71	24 28.0	5 39.00	+13.10	-0 8.20	+ 8.58	-3.43	-24.70	1 24 51.34	50 10 47.4
1 27 48.3	8.7	28 55.06	28 37.5	14 40.35	+13.56	-0 8.19	+10.01	-3.51	-24.60	1 29 1.84	50 1 47.5
1 28 56.6	9.0	30 3.36	29 51.4	18 17.05	+ 9.45	-0 8.20	+ 8.65	-3.48	-24.40	1 30 10.08	49 58 5.2
1 31 22.0	8.4	32 28.93	32 10.0	59 29.15	+14.80	-0 8.20	+ 9.05	-3.53	-24.20	1 32 35.71	50 16 58.6
1 32 20.2	9.0	33 28.06	33 12.7	21 39.20	+11.84	-0 8.19	+ 9.61	-3.57	-24.30	1 33 34.92	50 54 45.9
1 33 38.8	9.0	34 46.57	34 30.1	0 34.85	+12.92	-0 8.20	+ 8.67	-3.55	-24.10	1 34 53.41	50 15 50.4
1 34 36.0	3.0	35 43.34	35 32.7	12 52.05	+ 8.34	-0 8.20	+ 8.72	-3.55	-24.00	1 35 50.17	50 3 28.6
1 37 49.1	8.6	38 57.06	38 33.5	46 43.65	+18.39	-0 8.19	+ 9.02	-3.61	-23.80	1 39 4.01	50 29 46.9
1 39 11.2	8.9	40 19.04	39 59.3	34 34.55	+15.29	-0 8.19	+ 9.55	-3.64	-23.80	1 40 26.03	50 41 53.2
1 41 34.2	8.4	42 43.63	42 27.0	28 9.75	+12.85	-0 8.19	+ 9.61	-3.68	-23.60	1 42 50.66	50 48 15.4
1 43 36.1	6.5	44 44.94	44 33.4	24 57.40	+ 8.89	-0 8.19	+ 9.38	-3.71	-23.50	1 44 52.02	50 51 23.2
1 45 3.7	8.9	46 12.56	45 56.5	28 26.80	+12.47	-0 8.19	+ 9.64	-3.71	-23.30	1 46 19.68	50 47 57.6
1 46 26.0	6.8	47 36.47	47 25.8	11 53.50	+ 8.24	-0 8.19	+ 9.83	-3.73	-23.30	1 47 43.65	50 4 26.6
1 47 46.4	9.2	48 57.04	48 40.8	56 7.35	+12.67	-0 8.20	+ 8.87	-3.71	-23.10	1 49 4.18	50 20 16.2
1 48 41.6	9.5	49 50.78	49 37.3	57 16.45	+10.55	-0 8.20	+ 9.12	-3.73	-23.00	1 49 57.92	50 19 5.1
1 49 31.9	9.0	50 41.03	50 36.4	0 10.80	+ 3.60	-0 8.20	+ 8.68	-3.73	-22.90	1 50 48.19	50 16 3.3
1 51 48.3	9.2	52 59.01	52 44.5	12 0.45	+11.16	-0 8.19	+ 9.82	-3.79	-22.90	1 53 6.30	50 4 21.9
1 57 15.6	8.8	58 25.39	58 13.3	32 35.00	+ 9.38	-0 8.19	+ 9.46	-3.84	-22.40	1 58 32.75	50 43 44.5
1 58 13.2	8.7	59 22.94	59 10.2	46 18.15	+ 9.89	-0 8.19	+ 9.07	-3.84	-22.30	1 59 30.30	50 30 1.4
1 59 40.5	8.6	0 51.08	0 35.0	47 39.75	+12.55	-0 8.18	+ 9.17	-3.85	-22.20	2 0 58.49	50 28 42.4
2 1 40.5	8.9	2 51.60	2 34.7	15 11.80	+13.02	-0 8.18	+ 9.56	-3.90	-22.10	2 2 59.10	50 1 10.8
ZONE 9, DECEMBER 10, 1870.											
2 28 20.7	8.5	29 33.96	29 6.8	57 1.42	+21.27	-0 8.30	+ 8.82	-4.12	-19.80	2 29 41.79	50 19 25.8
2 29 23.1	9.0	30 35.86	30 25.9	1 46.40	+ 7.83	-0 8.30	+ 8.82	-4.12	-19.60	2 30 43.71	50 14 27.3
2 30 38.5	8.5	31 52.34	31 28.5	11 20.90	+18.31	-0 8.29	+ 9.65	-4.19	-19.60	2 32 0.31	51 5 3.7
2 46 43.0	6.5	47 57.40	47 37.5	31 2.15	+15.42	-0 8.29	+ 9.25	-4.30	-18.10	2 48 5.64	50 45 16.2
2 49 31.6	9.0	50 47.39	50 29.3	23 47.85	+13.98	-0 8.28	+ 9.75	-4.33	-17.80	2 50 55.71	50 52 29.0
2 51 56.5	8.8	53 12.84	52 54.5	19 36.80	+14.13	-0 8.28	+ 9.91	-4.36	-17.60	2 53 21.21	50 56 39.9
2 52 56.5	8.9	54 12.26	54 2.9	20 18.15	+ 7.26	-0 8.28	+ 9.51	-4.37	-17.50	2 54 20.64	50 55 51.1
2 58 10.8	7.5	59 26.46	59 2.3	35 17.00	+18.78	-0 8.28	+ 9.06	-4.39	-17.00	2 59 34.90	50 41 2.2
2 59 5.5	8.0	0 20.33	0 5.8	10 14.70	+11.39	-0 8.29	+ 8.47	-4.37	-16.80	3 0 28.68	50 5 56.4
3 0 8.4	8.3	1 24.69	1 13.0	48 58.65	+ 9.13	-0 8.28	+ 9.32	-4.39	-16.70	3 1 33.13	50 27 10.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
3 1 6.7	8.5	2 24.36	2 11.6	24 50.30	+19.90	-0 8.28	+ 9.86	-4.42	-16.70	3 2 32.88	50 51 20.2
3 2 31.0	9.0	3 47.64	3 32.2	18 29.15	+11.88	-0 8.28	+ 9.83	-4.44	-16.60	3 3 56.20	50 57 42.9
3 5 6.5	9.0	6 23.75	6 3.3	13 15.65	+15.71	-0 8.28	+ 9.85	-4.47	-16.30	3 6 32.36	50 2 59.8
3 6 26.2	7.3	7 42.84	7 24.0	30 58.05	+14.57	-0 8.28	+ 9.27	-4.46	-16.10	3 7 51.43	50 45 15.4
3 21 19.8	7.8	22 37.15	22 21.9	.....	.....	-0 8.29	.....	-4.50	.....	3 22 45.87	.....
3 23 38.2	9.0	24 56.04	24 38.8	.....	.....	-0 8.29	.....	-4.53	.....	3 25 4.82	.....
3 31 59.3	7.5	33 18.17	32 59.7	29 35.05	+14.49	-0 8.28	+ 9.65	-4.64	-13.40	3 33 27.17	50 46 32.8
3 35 15.9	8.7	36 36.33	36 9.9	14 43.45	+20.78	-0 8.29	+ 8.80	-4.60	-13.00	3 36 45.26	50 1 29.1
3 37 55.5	7.5	39 13.92	38 56.1	16 51.55	+13.73	-0 8.28	+ 9.70	-4.69	-12.80	3 39 23.05	50 59 14.2
3 38 59.8	8.0	40 20.08	40 13.4	27 22.80	+ 5.18	-0 8.28	+ 9.59	-4.68	-12.60	3 40 29.20	50 48 34.0
3 40 25.3	9.5	41 46.56	41 26.3	17 29.45	+15.66	-0 8.28	+ 9.71	-4.70	-12.50	3 41 55.73	50 58 37.6
3 41 24.8	...	42 43.62	42 34.8	51 42.85	+ 6.87	-0 8.28	+ 9.05	-4.67	-12.30	3 42 52.70	50 24 14.6
3 49 51.7	9.0	51 11.29	50 54.6	22 32.15	+12.90	-0 8.28	+ 9.65	-4.75	-11.50	3 51 20.57	50 53 29.6
3 50 50.0	8.0	52 8.75	52 0.4	53 30.35	+ 6.48	-0 8.28	+ 9.19	-4.72	-11.30	3 52 17.95	50 22 24.3
3 52 20.7	8.0	53 40.37	53 20.0	0 50.25	+15.98	-0 8.29	+ 8.64	-4.71	-11.10	3 53 49.57	50 15 13.0
3 53 57.8	9.0	55 19.71	55 5.8	32 17.35	+10.78	-0 8.27	+ 9.42	-4.75	-11.00	3 55 29.04	50 43 41.0
3 55 49.4	6.5	57 7.57	56 52.8	15 21.35	+11.65	-0 8.28	+ 8.39	-4.71	-10.70	3 57 16.79	50 0 36.4
4 1 41.9	7.8	3 2.20	2 40.8	25 31.85	+16.55	-0 8.27	+ 9.43	-4.80	-10.10	4 3 11.65	50 50 30.3
4 3 2.9	7.8	4 23.02	4 8.9	6 37.15	+11.07	-0 8.28	+ 8.68	-4.75	- 9.90	4 4 32.36	50 9 18.4
4 4 7.5	8.0	5 28.21	5 17.7	53 51.85	+ 8.20	-0 8.28	+ 9.22	-4.77	- 9.80	4 5 37.60	50 22 1.1
4 5 24.9	8.2	6 45.44	6 30.9	50 46.25	+11.32	-0 8.27	+ 8.94	-4.78	- 9.70	4 6 54.86	50 25 9.1
4 6 35.5	9.4	7 57.62	7 36.7	45 50.80	+16.28	-0 8.27	+ 8.90	-4.79	- 9.50	4 8 7.08	50 30 9.2
4 8 17.9	8.7	9 38.43	9 21.4	13 4.15	+13.09	-0 8.27	+ 9.88	-4.84	- 9.40	4 9 48.01	50 2 53.1
4 9 44.2	8.8	11 5.66	10 46.3	27 17.00	+15.01	-0 8.27	+ 9.51	-4.83	- 9.20	4 11 15.21	50 48 41.4
ZONE 10, DECEMBER 13, 1870.											
0 51 3.8	8.2	52 5.50	51 57.3	50 18.40	+ 6.40	-0 7.61	+ 8.74	-3.00	-26.80	0 52 12.07	50 26 5.2
0 52 16.7	8.2	53 19.47	53 10.1	37 50.50	+ 7.30	-0 7.61	+ 9.25	-3.02	-26.80	0 53 26.07	50 38 34.3
0 53 54.2	6.8	54 56.17	54 44.8	54 43.15	+ 8.91	-0 7.62	+ 9.15	-3.03	-26.70	0 55 2.79	50 21 43.2
0 55 13.9	8.9	56 16.50	56 4.1	47 35.60	+ 9.67	-0 7.61	+ 9.03	-3.05	-26.70	0 56 23.16	50 28 51.1
0 58 30.9	7.9	59 32.93	59 25.8	21 21.55	+ 5.60	-0 7.62	+ 8.27	-3.07	-26.40	0 59 39.64	49 55 0.4
1 0 45.8	8.0	1 48.82	1 39.1	13 41.60	+ 7.63	-0 7.62	+ 8.65	-3.10	-26.30	1 1 55.58	50 2 42.6
1 1 58.7	9.0	3 3.25	2 50.3	15 59.25	+10.24	-0 7.62	+ 8.32	-3.12	-26.20	1 3 10.03	50 0 27.2
1 4 16.7	7.0	5 20.58	5 9.2	20 0.40	+ 8.80	-0 7.60	+ 9.31	-3.17	-26.30	1 5 27.48	50 56 25.2
1 6 48.6	7.0	7 52.10	7 41.3	11 39.50	+ 8.31	-0 7.61	+ 9.63	-3.21	-26.20	1 7 59.05	51 4 45.7
1 11 56.6	7.8	13 0.92	12 50.2	20 6.30	+ 8.26	-0 7.61	+ 9.29	-3.27	-25.90	1 13 7.98	50 56 18.1
1 12 56.8	9.0	14 1.40	13 53.5	49 57.50	+ 6.16	-0 7.62	+ 8.72	-3.27	-25.70	1 14 8.43	50 26 24.3
1 14 57.6	9.3	16 2.64	15 51.0	20 45.60	+ 8.96	-0 7.61	+ 9.35	-3.31	-25.60	1 16 9.76	50 55 39.5
1 16 30.6	8.5	17 35.30	17 21.0	14 34.95	+11.02	-0 7.61	+ 9.88	-3.33	-25.60	1 17 42.46	51 1 52.4
1 18 9.1	9.0	19 15.41	19 4.2	32 20.50	+ 8.68	-0 7.62	+ 9.27	-3.34	-25.40	1 19 22.58	50 44 3.9
1 19 10.6	9.0	20 16.47	20 3.7	55 17.15	+10.01	-0 7.63	+ 8.63	-3.34	-25.30	1 20 23.62	50 21 7.9
1 20 9.1	6.8	21 13.50	21 5.0	14 6.95	+ 6.55	-0 7.61	+ 9.86	-3.38	-25.40	1 21 20.73	51 2 15.6
1 21 54.8	8.9	22 59.91	22 49.8	14 58.85	+ 7.95	-0 7.63	+ 8.22	-3.36	-25.10	1 23 7.10	50 0 23.5
1 23 38.0	8.8	24 44.05	24 37.0	5 32 05	+ 5.49	-0 7.63	+ 8.45	-3.39	-25.00	1 24 51.29	50 10 47.9
1 31 22.0	8.8	32 28.23	32 19.5	59 21.55	+ 6.81	-0 7.63	+ 8.98	-3.48	-24.60	1 32 35.63	50 16 59.4
1 32 20.2	9.0	33 27.46	33 16.5	21 35.90	+ 8.50	-0 7.62	+ 9.46	-3.52	-24.60	1 33 34.94	50 54 47.1
1 37 49.1	9.5	38 56.32	38 43.3	46 35.55	+10.13	-0 7.63	+ 8.95	-3.57	-24.20	1 39 3.87	50 29 47.9
1 39 11.2	8.6	40 18.34	40 6.0	34 29.45	+ 9.55	-0 7.63	+ 9.47	-3.59	-24.10	1 40 25.94	50 41 53.8
1 41 34.2	9.0	42 43.03	42 30.7	28 6.80	+ 9.52	-0 7.63	+ 9.48	-3.63	-24.00	1 42 50.67	50 48 16.1
1 42 29.9	9.7	43 38.23	43 27.7	3 4.95	+ 8.23	-0 7.64	+ 8.77	-3.61	-23.80	1 43 45.84	50 13 16.0
1 43 36.1	6.5	44 44.18	44 37.5	24 56.35	+ 5.18	-0 7.63	+ 9.76	-3.65	-23.80	1 44 51.88	50 51 22.3
1 45 3.7	8.7	46 11.84	46 0.2	28 24.00	+ 8.98	-0 7.64	+ 9.50	-3.66	-23.80	1 46 19.56	50 47 57.9
1 46 26.0	7.8	47 35.85	47 22.3	11 54.70	+10.39	-0 7.63	+ 9.63	-3.69	-23.70	1 47 43.63	51 4 28.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
1 47 46.4	9.0	48 56.48	48 46.0	56 3.60	+ 8.21	-0 7.64	+ 8.71	-3.67	-23.50	1 49 4.22	50 20 16.5
1 48 41.6	9.2	49 50.02	49 39.4	57 14.75	+ 8.27	-0 7.64	+ 8.96	-3.68	-23.40	1 49 57.77	50 19 5.6
1 49 31.9	8.8	50 40.33	50 34.6	0 12.25	+ 4.46	-0 7.64	+ 8.49	-3.68	-23.30	1 50 48.10	50 16 3.7
1 51 48.3	9.0	52 58.31	52 45.0	12 1.40	+10.24	-0 7.63	+ 9.63	-3.75	-23.30	1 53 6.20	50 4 21.0
1 57 15.6	8.8	58 24.77	58 16.8	32 34.15	+ 6.20	-0 7.64	+ 9.30	-3.79	-22.90	1 58 32.73	50 43 43.2
1 58 13.2	8.7	59 22.30	59 13.3	46 15.05	+ 7.01	-0 7.64	+ 8.93	-3.79	-22.80	1 59 30.26	50 30 2.6
1 59 40.5	8.7	0 50.40	0 38.7	47 34.65	+ 9.12	-0 7.64	+ 9.02	-3.81	-22.60	2 0 58.39	50 28 45.1
1 59 40.5	8.7	0 50.52	0 40.7	47 34.65	+ 7.64	-0 7.64	+ 9.02	-3.81	-22.60	2 0 58.51	50 28 43.6
ZONE 11, DECEMBER 13, 1870.											
2 10 33.0	7.5	11 42.49	11 31.7	53 20.60	+ 8.43	-0 7.67	+ 9.00	-3.92	-21.70	2 11 50.64	50 22 57.1
2 11 49.4	7.8	13 0.75	12 48.0	33 23.40	+ 9.85	-0 7.67	+ 9.33	-3.95	-21.70	2 13 8.97	50 42 55.6
2 13 17.1	8.5	14 29.39	14 24.8	48 22.65	+ 3.59	-0 7.68	+ 9.11	-3.95	-21.50	2 14 37.60	50 27 49.8
2 14 7.9	8.3	15 20.56	15 12.9	56 18.70	+ 6.02	-0 7.68	+ 8.74	-3.95	-21.50	2 15 28.78	50 19 55.6
2 18 3.8	9.0	19 15.17	19 3.0	23 20.15	+ 9.43	-0 7.68	+ 9.20	-4.02	-21.20	2 19 23.52	50 52 57.3
2 20 6.3	8.5	21 17.68	21 5.3	35 22.40	+ 9.62	-0 7.68	+ 8.98	-4.03	-21.00	2 21 26.05	50 40 54.7
2 21 30.7	9.0	22 41.92	22 33.8	30 26.00	+ 6.28	-0 7.68	+ 9.07	-4.05	-20.90	2 22 50.32	50 45 47.6
2 25 21.8	9.3	26 34.43	26 18.3	37 57.05	+12.51	-0 7.68	+ 9.21	-4.08	-20.70	2 26 42.89	50 38 22.2
2 28 20.7	8.7	29 33.26	29 16.7	56 55.65	+12.98	-0 7.68	+ 8.75	-4.09	-20.30	2 29 41.74	50 19 23.2
2 29 23.1	8.0	30 35.10	30 23.2	1 49.10	+ 9.32	-0 7.69	+ 8.65	-4.10	-20.10	2 30 43.58	50 14 25.9
2 30 38.5	8.0	31 51.64	31 41.9	11 13.40	+ 7.46	-0 7.67	+ 9.55	-4.16	-20.10	2 32 0.26	51 5 0.3
2 46 43.0	7.0	47 56.76	47 45.7	30 55.80	+ 8.45	-0 7.69	+ 9.11	-4.28	-18.60	2 48 5.62	50 45 15.4
2 47 58.5	9.5	49 13.61	49 1.9	48 33.10	+ 9.12	-0 7.69	+ 9.09	-4.29	-18.50	2 49 22.44	50 27 38.5
2 49 31.6	8.0	50 46.81	50 35.3	23 44.30	+ 8.89	-0 7.68	+ 9.60	-4.31	-18.30	2 50 55.75	50 52 27.3
2 51 56.5	8.2	53 12.16	52 59.6	19 34.20	+ 9.73	-0 7.69	+ 9.76	-4.35	-18.10	2 53 21.13	50 56 37.9
2 52 56.5	8.3	54 11.56	53 59.2	20 19.30	+ 9.57	-0 7.69	+ 9.27	-4.35	-18.00	2 54 20.55	50 55 52.0
2 54 20.0	8.0	55 35.59	55 19.1	23 45.95	+12.75	-0 7.70	+ 9.58	-4.36	-17.80	2 55 44.59	50 52 28.6
2 55 59.0	8.8	57 11.17	56 53.5	39 10.85	+13.76	-0 7.70	+ 9.29	-4.36	-17.60	2 57 20.15	50 37 4.1
2 58 10.8	7.0	59 25.74	59 15.5	35 7.30	+ 7.92	-0 7.70	+ 8.95	-4.39	-17.50	2 59 34.76	51 41 0.9
2 59 5.5	8.0	0 19.67	0 9.0	10 10.40	+ 8.41	-0 7.71	+ 8.29	-4.35	-17.30	3 0 28.62	50 5 57.5
3 0 8.4	8.0	1 24.03	1 13.0	48 57.35	+ 8.58	-0 7.70	+ 9.13	-4.38	-17.20	3 1 33.06	50 27 11.4
3 1 6.7	8.0	2 23.51	2 18.2	24 45.00	+ 4.10	-0 7.70	+ 9.73	-4.41	-17.20	3 2 32.62	50 51 19.5
3 2 31.0	8.2	3 46.99	3 32.6	18 30.40	+11.11	-0 7.69	+ 9.65	-4.43	-17.00	3 3 56.15	50 57 40.8
3 5 6.5	8.7	6 22.99	6 6.6	13 11.80	+12.63	-0 7.69	+ 9.69	-4.46	-16.80	3 6 32.20	51 3 0.3
3 6 26.2	7.0	7 42.18	7 28.7	30 54.05	+10.46	-0 7.70	+ 9.10	-4.45	-16.60	3 7 51.36	50 45 15.1
3 8 4.0	7.5	9 19.67	9 8.0	10 22.65	+ 9.19	-0 7.71	+ 8.30	-4.44	-16.40	3 9 28.75	50 5 44.1
3 9 42.4	7.3	10 58.82	10 47.6	45 22.30	+ 8.72	-0 7.70	+ 8.81	-4.46	-16.30	3 11 8.02	50 30 44.0
3 10 35.9	8.0	11 51.91	11 44.3	43 45.40	+ 5.92	-0 7.70	+ 9.23	-4.47	-16.20	3 12 1.13	50 32 17.4
3 13 11.0	8.3	14 27.35	14 13.2	3 9.25	+11.05	-0 7.72	+ 8.72	-4.47	-15.90	3 14 36.45	50 12 58.6
3 15 32.7	7.4	16 49.53	16 36.2	17 47.40	+10.26	-0 7.70	+ 9.60	-4.53	-15.80	3 16 58.90	50 58 19.9
3 16 33.7	8.0	17 51.32	17 40.0	11 49.40	+ 8.88	-0 7.72	+ 8.45	-4.49	-15.60	3 18 0.54	50 4 15.2
3 17 38.5	7.5	18 55.36	18 45.9	45 56.80	+ 7.41	-0 7.71	+ 8.79	-4.52	-15.50	3 19 4.67	50 30 6.4
3 19 39.0	8.3	20 56.38	20 47.2	21 10.65	+ 7.10	-0 7.70	+ 9.38	-4.56	-15.30	3 21 5.90	50 54 52.4
3 21 19.8	7.8	22 36.59	22 20.3	17 6.25	+12.84	-0 7.72	+ 8.37	-4.51	-15.00	3 22 45.87	49 59 1.3
3 23 38.2	9.0	24 55.72	24 44.6	6 33.00	+ 8.71	-0 7.72	+ 8.52	-4.53	-14.80	3 25 5.07	50 9 30.0
3 31 59.3	7.8	33 17.61	33 0.6	29 33.60	+13.17	-0 7.72	+ 9.50	-4.64	-14.00	3 33 27.17	50 46 32.6
3 35 15.9	7.8	36 35.97	36 31.4	14 27.70	+ 3.62	-0 7.73	+ 8.71	-4.60	-13.50	3 36 45.46	50 1 27.6
3 41 24.8	7.0	42 43.16	42 28.6	51 47.00	+11.40	-0 7.72	+ 8.82	-4.67	-12.90	3 42 52.80	50 24 14.6
3 49 51.7	8.0	51 10.81	50 55.7	22 27.85	+11.67	-0 7.73	+ 9.46	-4.76	-12.00	3 51 20.63	50 53 32.4
3 50 50.0	7.8	52 8.21	52 0.0	53 27.95	+ 6.41	-0 7.73	+ 9.01	-4.72	-11.90	3 52 17.96	50 22 26.3
3 52 20.7	8.0	53 39.81	53 25.1	0 45.15	+11.51	-0 7.73	+ 8.48	-4.72	-11.70	3 53 49.56	50 15 13.3
3 53 57.8	9.0	55 19.01	55 3.7	32 14.30	+11.86	-0 7.73	+ 9.19	-4.76	-11.50	3 55 28.87	50 43 44.9
3 55 49.4	6.0	57 7.05	56 57.8	15 16.85	+ 7.24	-0 7.74	+ 8.21	-4.72	-11.30	3 57 16.80	50 0 36.2

JOURNAL OF ZONE OBSERVATIONS.

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R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
4 1 41.9	7.7	3 1.56	2 49.0	25 26.95	+ 9.75	-0 7.73	+ 9.17	-4.81	-10.70	4 3 11.54	50 50 28.0
4 3 2.9	7.8	4 22.48	4 13.2	6 33.05	+ 7.30	-0 7.74	+ 8.50	-4.76	-10.50	4 4 32.35	50 9 18.4
4 4 7.5	7.3	5 27.65	5 18.4	53 50.55	+ 7.27	-0 7.73	+ 9.03	-4.78	-10.40	4 5 37.58	50 22 1.1
4 5 24.9	8.0	6 44.90	6 32.3	50 44.65	+ 9.83	-0 7.73	+ 8.72	-4.80	-10.20	4 6 54.84	50 25 9.0
4 8 17.9	8.0	9 37.95	9 28.9	12 57.70	+ 6.93	-0 7.73	+ 9.71	-4.86	- 9.90	4 9 48.05	51 2 53.2
4 9 44.2	7.8	11 5.14	10 50.0	27 15.20	+11.69	-0 7.74	+ 9.32	-4.85	- 9.70	4 11 15.20	50 48 39.7
ZONE 12, DECEMBER 18, 1870.											
0 50 32.0	9.0	51 34.35	51 24.8	15 43.90	+ 7.48	-0 7.93	+ 8.66	-2.87	-27.10	0 51 40.68	50 0 42.0
0 51 47.2	8.7	52 49.12	52 37.3	33 53.15	+ 9.15	-0 7.92	+ 9.74	-2.90	-27.20	0 52 55.52	50 42 35.2
0 53 24.5	8.2	54 27.09	54 17.4	54 5.30	+ 7.50	-0 7.93	+ 9.41	-2.92	-27.00	0 54 33.49	50 22 21.2
0 54 15.5	9.0	55 18.35	55 16.1	55 26.60	+ 1.72	-0 7.93	+ 8.90	-2.93	-27.00	0 55 24.77	50 20 53.5
0 57 21.3	9.1	58 24.23	58 15.0	36 57.20	+ 7.14	-0 7.92	+ 9.44	-2.98	-26.90	0 58 30.64	50 39 28.6
0 59 54.7	9.7	0 58.72	0 47.5	28 50.55	+ 8.67	-0 7.92	+ 9.87	-3.02	-26.80	1 1 5.29	50 47 37.0
1 0 59.5	8.4	2 3.35	1 50.0	21 52.05	+10.27	-0 7.92	+ 9.74	-3.03	-26.70	1 2 9.96	50 54 37.0
1 2 1.3	7.5	3 4.95	2 53.0	55 41.00	+ 9.30	-0 7.93	+ 8.93	-3.03	-26.60	1 3 11.54	50 20 46.2
1 3 0.9	9.4	4 5.11	3 52.5	24 34.30	+ 9.74	-0 7.92	+10.04	-3.06	-26.70	1 4 11.75	50 51 54.2
1 4 36.9	8.5	5 41.64	5 28.1	50 37.60	+10.54	-0 7.92	+ 9.04	-3.07	-26.50	1 5 48.29	50 25 50.7
1 7 2.6	8.8	8 8.81	7 52.0	23 21.70	+12.98	-0 7.92	+ 9.87	-3.11	-26.50	1 8 15.54	50 53 9.6
1 8 46.9	9.8	9 51.79	9 30.9	59 40.65	+16.36	-0 7.93	+ 9.24	-3.12	-26.30	1 9 58.51	50 16 53.4
1 10 11.9	8.1	11 16.97	11 4.0	18 34.10	+10.03	-0 7.92	+ 9.95	-3.15	-26.40	1 11 23.78	50 57 54.0
1 11 56.6	7.0	13 1.06	12 46.2	20 12.20	+11.50	-0 7.92	+ 9.53	-3.17	-26.30	1 13 7.91	50 56 16.8
1 13 18.8	8.8	14 24.11	14 13.5	19 26.90	+ 8.35	-0 7.93	+ 8.90	-3.16	-26.00	1 14 30.92	49 56 58.5
1 15 24.9	9.7	16 29.28	16 11.5	17 53.05	+14.02	-0 7.93	+ 8.72	-3.19	-25.90	1 16 36.14	49 58 37.6
1 19 31.7	8.7	20 38.14	20 24.4	12 34.90	+10.78	-0 7.93	+ 8.80	-3.24	-25.70	1 20 45.08	50 3 52.2
1 21 54.8	8.1	23 0.08	22 44.7	15 5.90	+12.12	-0 7.93	+ 8.43	-3.27	-25.60	1 23 7.06	50 0 21.9
1 23 38.0	8.6	24 44.25	24 26.9	5 40.85	+13.57	-0 7.93	+ 8.65	-3.30	-25.50	1 24 51.28	50 10 48.4
1 27 48.3	8.7	28 54.66	28 39.5	14 39.25	+11.71	-0 7.92	+10.22	-3.38	-25.40	1 29 1.84	51 1 49.3
1 28 56.6	8.6	30 2.90	29 53.5	18 16.65	+ 7.41	-0 7.93	+ 8.84	-3.35	-25.20	1 30 10.02	49 58 6.1
1 31 41.0	8.3	32 47.31	32 31.2	53 55.00	+12.58	-0 7.93	+ 9.35	-3.40	-25.10	1 32 54.51	50 22 33.1
1 33 38.8	8.9	34 46.21	34 29.3	0 36.90	+13.24	-0 7.93	+ 8.73	-3.42	-24.90	1 34 53.45	50 15 51.1
1 34 36.0	3.0	35 42.92	35 32.1	12 54.55	+ 8.49	-0 7.93	+ 8.86	-3.42	-24.80	1 35 50.15	50 3 28.8
1 35 22.5	9.8	36 30.22	36 46.7	47 33.65	-12.86	-0 7.92	+ 9.28	-3.45	-24.80	1 36 37.52	50 28 28.6
1 37 57.9	8.4	39 5.82	38 53.6	21 47.50	+ 9.42	-0 7.92	+ 9.73	-3.50	-24.80	1 39 13.21	50 55 37.0
1 39 21.4	9.4	40 29.62	40 12.8	46 35.90	+13.10	-0 7.92	+ 9.17	-3.50	-24.60	1 40 37.00	50 29 51.7
1 42 29.9	9.4	43 38.41	43 16.3	3 17.25	+17.32	-0 7.93	+ 9.00	-3.53	-24.40	1 43 45.81	50 13 14.0
1 43 36.1	5.5	44 44.32	44 31.8	25 1.80	+ 9.67	-0 7.92	+ 9.43	-3.56	-24.40	1 44 51.82	50 51 22.0
1 45 25.8	8.8	46 34.30	46 19.0	46 49.45	+11.92	-0 7.92	+ 9.22	-3.57	-24.30	1 46 41.80	50 29 36.1
1 47 19.8	8.8	48 28.77	48 11.9	15 41.05	+13.31	-0 7.93	+ 8.49	-3.58	-24.00	1 48 36.25	50 0 45.1
1 48 27.0	8.9	49 35.17	49 22.6	16 20.20	+ 9.92	-0 7.93	+ 8.50	-3.59	-23.90	1 49 42.67	50 0 2.4
1 50 7.0	9.2	51 15.77	51 3.3	16 56.45	+ 9.84	-0 7.93	+ 8.68	-3.60	-23.80	1 51 23.31	49 58 26.0
1 50 18.9	8.7	51 28.01	51 6.2	16 56.45	+17.17	-0 7.93	+ 8.59	-3.61	-23.80	1 51 35.55	49 59 33.2
1 51 52.4	8.9	53 0.13	52 47.0	14 52.10	+10.31	-0 7.93	+ 9.07	-3.62	-23.70	1 53 7.71	50 1 31.0
1 53 1.8	8.9	54 11.60	53 59.8	34 34.10	+ 9.16	-0 7.93	+ 9.81	-3.67	-23.70	1 54 19.26	50 41 48.3
1 54 3.7	8.3	55 12.83	55 0.4	13 29.15	+ 9.55	-0 7.92	+10.10	-3.69	-23.70	1 55 20.56	51 2 53.8
1 55 32.2	9.4	56 42.38	56 29.5	36 11.80	+10.02	-0 7.92	+ 9.32	-3.69	-23.50	1 56 50.10	50 40 10.6
1 57 16.1	8.6	58 24.49	58 8.0	22 48.45	+12.75	-0 7.92	+ 9.82	-3.73	-23.50	1 58 32.26	50 53 36.9
2 0 27.2	9.0	1 37.67	1 21.5	12 8.50	+12.37	-0 7.92	+ 9.92	-3.78	-23.30	2 1 45.51	51 4 16.0
2 1 40.5	8.5	2 51.04	2 36.5	15 11.75	+11.17	-0 7.92	+ 9.65	-3.78	-23.20	2 2 58.92	51 1 11.2
2 3 59.4	4.5	5 10.16	4 54.4	47 20.60	+12.31	-0 7.92	+ 9.26	-3.78	-22.90	2 5 18.03	50 29 2.8
2 5 48.8	9.2	6 59.64	6 44.7	7 25.00	+11.69	-0 7.93	+ 8.86	-3.79	-22.70	2 7 7.50	50 8 57.2
2 9 22.5	8.6	10 32.69	10 24.0	20 15.00	+ 6.78	-0 7.93	+ 8.39	-3.81	-22.50	2 10 40.59	49 56 1.2
2 11 49.4	8.1	13 0.85	12 47.4	33 26.00	+10.39	-0 7.92	+ 9.72	-3.88	-22.40	2 13 8.89	50 42 54.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
2 13 17.1	8.8	14 29.49	14 15.7	48 30.00	+10.76	-0 7.92	+ 9.41	-3.88	-22.20	2 14 37.53	50 27 50.5
2 14 7.9	8.7	15 20.66	15 13.0	56 19.35	+ 6.02	-0 7.93	+ 9.01	-3.89	-22.20	2 15 28.69	50 19 55.8
2 15 41.7	8.8	16 53.70	16 36.3	35 39.00	+13.51	-0 7.92	+ 9.24	-3.93	-22.00	2 17 1.79	50 40 43.8
2 18 3.8	9.0	19 15.27	18 57.4	23 25.50	+13.83	-0 7.92	+ 9.85	-3.96	-21.90	2 19 23.44	50 52 57.6
2 20 14.7	9.0	21 27.63	21 7.4	22 40.00	+15.61	-0 7.92	+ 9.77	-3.98	-21.70	2 21 35.84	50 53 44.5
2 21 30.7	8.8	22 41.98	22 24.8	30 34.05	+13.33	-0 7.92	+ 9.32	-3.99	-21.60	2 22 50.20	50 45 47.5
2 25 21.8	9.0	26 34.53	26 21.3	37 56.10	+10.26	-0 7.92	+ 9.53	-4.02	-21.30	2 26 42.81	50 38 21.9
2 28 23.9	6.8	29 35.55	29 21.0	19 26.60	+11.43	-0 7.93	+ 8.92	-4.01	-20.90	2 29 43.79	49 56 51.6
2 29 38.5	9.5	30 51.81	30 35.2	6 34.90	+13.03	-0 7.93	+ 8.75	-4.05	-20.80	2 31 0.23	50 9 44.4
2 31 11.8	9.2	32 25.15	32 6.0	17 52.35	+14.81	-0 7.92	+ 9.79	-4.10	-20.80	2 32 33.57	50 58 29.4
2 32 32.7	8.5	33 45.03	33 27.2	10 15.45	+13.99	-0 7.93	+ 8.50	-4.07	-20.60	2 33 53.35	50 6 4.0
2 33 34.5	8.7	34 48.82	34 33.2	16 19.10	+12.03	-0 7.92	+ 9.75	-4.13	-20.60	2 34 57.29	50 59 59.4
2 34 57.7	9.7	36 10.80	35 51.0	16 27.85	+15.59	-0 7.93	+ 8.53	-4.09	-20.30	2 36 19.15	49 59 52.9
2 35 45.1	8.6	36 58.72	36 49.1	11 30.65	+ 7.55	-0 7.93	+ 8.69	-4.10	-20.30	2 37 7.09	50 4 42.0
2 37 25.5	9.0	38 39.27	38 22.2	21 30.35	+13.21	-0 7.92	+ 9.65	-4.16	-20.30	2 38 47.80	50 54 48.5
2 38 30.2	7.5	39 44.43	39 33.4	53 53.60	+ 8.59	-0 7.93	+ 9.41	-4.14	-20.10	2 39 52.90	50 22 20.3
2 41 8.0	8.9	42 21.67	42 7.3	58 20.70	+11.27	-0 7.93	+ 9.20	-4.16	-19.80	2 42 30.17	50 17 55.2
2 44 17.8	6.5	45 31.83	45 21.0	36 57.70	+ 8.39	-0 7.92	+ 9.44	-4.21	-19.60	2 45 40.45	50 39 14.8
2 45 22.7	8.3	46 36.50	46 27.1	42 7.50	+ 7.31	-0 7.92	+ 9.37	-4.21	-19.50	2 46 45.13	50 34 3.7
2 46 43.0	5.8	47 56.80	47 45.0	30 57.70	+ 9.14	-0 7.92	+ 9.41	-4.33	-19.20	2 48 5.38	50 45 15.3
2 47 58.5	9.7	49 13.81	48 59.5	48 36.55	+11.15	-0 7.92	+ 9.42	-4.33	-19.20	2 49 22.37	50 27 38.0
2 49 31.6	8.9	50 46.95	50 32.8	23 46.90	+10.90	-0 7.92	+ 9.95	-4.32	-18.50	2 50 55.64	50 52 28.2
ZONE 13, DECEMBER 18, 1870.											
3 24 15.0	9.0	25 33.11	25 24.7	57 45.30	+ 6.57	-0 7.93	+ 9.18	-4.53	-15.60	3 25 42.30	50 18 16.8
4 0 12.2	8.3	1 32.06	1 12.1	17 22.85	+15.75	-0 7.93	+ 8.63	-4.75	-11.70	4 1 41.66	49 58 38.7
4 1 42.2	8.5	3 1.87	2 46.9	38 42.30	+11.66	-0 7.92	+ 9.60	-4.80	-11.60	4 3 11.61	50 37 15.6
4 3 42.6	9.4	5 3.45	4 37.3	53 40.20	+20.47	-0 7.93	+ 9.21	-4.80	-11.30	4 5 13.16	50 22 25.7
4 5 4.2	8.7	6 24.57	6 1.0	44 22.75	+18.37	-0 7.92	+ 9.49	-4.81	-11.20	4 6 34.34	50 31 40.9
4 6 16.8	7.5	7 36.52	7 16.5	42 54.70	+15.57	-0 7.92	+ 9.37	-4.82	-11.10	4 7 46.30	50 33 5.6
4 7 22.2	7.0	8 41.45	8 29.5	16 42.85	+ 9.37	-0 7.93	+ 8.64	-4.79	-11.00	4 8 51.13	49 59 10.3
4 8 17.9	7.8	9 38.21	9 25.0	13 1.65	+10.17	-0 7.92	+ 8.95	-4.87	-10.90	4 9 48.11	51 2 52.3
4 9 13.5	7.0	10 34.03	10 21.6	39 0.35	+ 9.64	-0 7.92	+ 9.66	-4.85	-10.70	4 10 43.85	50 36 53.6
4 10 56.8	9.5	12 17.54	11 54.0	36 46.95	+18.25	-0 7.92	+ 9.31	-4.86	-10.50	4 12 27.39	50 39 14.8
4 12 22.3	8.0	13 43.16	13 24.2	46 39.40	+14.81	-0 7.92	+ 9.16	-4.85	-10.30	4 13 53.00	50 29 18.4
4 13 32.9	7.5	14 54.00	14 40.3	42 44.85	+10.66	-0 7.92	+ 9.40	-4.86	-10.20	4 15 3.86	50 33 8.7
4 14 47.2	8.8	16 9.43	15 50.2	13 14.45	+14.78	-0 7.92	+10.02	-4.91	-10.10	4 16 19.39	51 2 43.4
4 15 56.3	7.6	17 17.72	17 1.0	20 48.40	+12.90	-0 7.92	+ 9.58	-4.90	-10.00	4 17 27.68	50 55 6.8
4 17 17.4	8.0	18 38.58	18 16.5	51 55.35	+17.26	-0 7.92	+ 9.07	-4.87	- 9.80	4 18 48.45	50 24 3.4
4 18 30.1	7.8	19 52.20	19 34.5	56 10.50	+13.84	-0 7.93	+ 8.96	-4.87	- 9.70	4 20 2.06	50 19 44.3
4 19 36.4	8.0	20 57.42	20 46.0	18 51.85	+ 8.98	-0 7.93	+ 8.88	-4.85	- 9.40	4 21 7.22	49 56 57.9
4 22 10.7	8.0	23 32.16	23 15.0	29 9.70	+13.32	-0 7.92	+ 9.89	-4.94	- 9.20	4 23 42.13	50 46 44.6
4 23 34.0	7.5	24 55.37	24 36.4	31 37.55	+14.73	-0 7.92	+ 9.42	-4.93	- 9.00	4 25 5.36	50 44 17.3
4 24 45.8	8.0	26 6.77	25 49.8	55 6.90	+13.29	-0 7.92	+ 8.82	-4.90	- 8.80	4 26 16.70	50 20 45.7
4 28 32.8	8.6	29 55.85	29 33.7	18 32.15	+17.05	-0 7.92	+ 9.92	-4.96	- 8.40	4 30 5.94	50 57 24.1
4 32 8.4	8.5	33 30.81	33 4.9	43 41.90	+20.17	-0 7.93	+ 9.39	-4.95	- 7.90	4 33 40.83	50 32 16.0
4 33 26.2	8.5	34 47.16	34 28.4	8 4.25	+14.76	-0 7.94	+ 8.91	-4.92	- 7.70	4 34 57.11	50 7 47.4
4 35 15.8	7.6	36 38.17	36 14.6	24 6.10	+18.24	-0 7.93	+ 9.89	-4.98	- 7.60	4 36 48.29	50 51 49.4
4 36 28.9	7.8	37 51.36	37 38.0	55 26.80	+10.47	-0 7.94	+ 8.88	-4.95	- 7.40	4 38 1.38	50 20 19.6
4 37 28.8	8.0	38 50.52	38 34.2	51 47.15	+12.73	-0 7.93	+ 9.11	-4.96	- 7.30	4 39 0.57	50 24 1.4
4 38 41.6	8.4	40 3.37	39 51.5	4 5.20	+ 9.33	-0 7.94	+ 9.17	-4.95	- 7.10	4 40 13.37	50 11 39.8
4 39 32.9	7.8	40 54.57	40 41.5	4 29.00	+10.27	-0 7.94	+ 9.19	-4.95	- 7.10	4 41 4.58	50 11 16.6
4 40 40.0	8.5	42 2.32	41 51.4	57 3.20	+ 8.53	-0 7.93	+ 9.10	-4.96	- 7.00	4 42 12.38	50 18 40.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
4 42 31.8	8.3	43 53.86	43 43.1	51 53.20	+ 8.43	-0 7.93	+ 9.17	-4.98	- 6.70	4 44 3.95	50 23 49.6
4 42 44.9	8.3	44 7.10	43 33.7	51 53.20	+26.08	-0 7.93	+ 8.95	-4.98	- 6.70	4 44 17.19	50 24 7.0
4 44 11.9	8.9	45 33.42	45 10.9	56 7.05	+17.59	-0 7.93	+ 8.64	-4.97	- 6.50	4 45 43.51	50 19 43.9
4 45 53.2	9.0	47 16.11	46 56.5	17 23.50	+15.11	-0 7.93	+ 9.82	-5.03	- 6.40	4 47 26.34	50 58 25.6
4 49 34.0	9.0	50 56.63	50 33.1	18 3.35	+18.13	-0 7.93	+ 9.88	-5.05	- 5.90	4 51 6.87	50 57 47.8
4 50 40.4	8.9	52 2.40	51 47.7	26 30.05	+11.37	-0 7.93	+ 9.59	-5.04	- 5.80	4 52 12.63	50 49 13.7
4 51 36.6	8.5	52 59.00	52 46.7	50 27.60	+ 9.60	-0 7.93	+ 8.99	-5.01	- 5.60	4 53 9.16	50 25 13.6
4 53 2.7	8.4	54 25.80	54 8.0	56 10.25	+13.92	-0 7.94	+ 8.95	-5.00	- 5.50	4 54 35.95	50 19 34.7
4 55 47.3	8.8	57 9.45	56 50.5	52 27.45	+14.83	-0 7.93	+ 9.16	-5.02	- 5.20	4 57 19.63	50 23 17.8
4 57 14.4	8.0	58 37.45	58 20.0	39 48.05	+13.61	-0 7.93	+ 9.70	-5.04	- 5.00	4 58 47.69	50 35 56.1
5 7 47.1	7.5	9 10.24	8 55.3	42 10.10	+11.59	-0 7.93	+ 9.35	-5.05	- 3.70	5 9 20.54	50 33 28.5
5 9 34.9	8.2	10 56.90	10 38.7	46 41.65	+14.19	-0 7.93	+ 9.18	-5.06	- 3.40	5 11 7.19	50 28 58.9
5 12 16.1	8.2	13 39.17	13 15.0	10 1.20	+19.02	-0 7.94	+ 8.41	-5.03	- 3.10	5 13 49.39	50 5 42.6
5 13 35.3	8.4	14 57.75	14 43.7	23 57.50	+10.82	-0 7.93	+ 9.98	-5.10	- 3.00	5 15 8.13	50 51 39.2
5 14 46.5	8.5	16 10.08	15 52.9	21 39.80	+13.29	-0 7.93	+ 9.69	-5.10	- 2.80	5 16 20.48	50 53 58.7
5 20 31.7	7.5	21 54.58	21 32.4	19 58.95	+17.14	-0 7.93	+10.10	-5.11	- 2.10	5 22 5.01	50 55 42.0
5 21 39.3	7.5	23 1.01	22 47.4	47 46.65	+10.60	-0 7.93	+ 9.33	-5.08	- 2.00	5 23 11.35	50 27 46.6
5 22 28.2	8.5	23 52.05	23 41.5	14 7.45	+ 8.34	-0 7.93	+ 9.00	-5.04	- 1.90	5 24 2.30	50 1 23.0
ZONE 14, DECEMBER 22, 1870.											
0 51 47.2	9.0	52 48.46	52 33.6	33 38.55	+11.56	-0 7.16	+10.08	-2.82	-27.40	0 52 55.70	50 42 35.4
0 53 24.5	8.6	54 26.37	54 14.8	53 48.95	+ 9.06	-0 7.16	+ 9.71	-2.83	-27.20	0 54 33.63	50 22 22.2
0 55 13.9	9.0	56 16.00	56 2.4	47 19.25	+10.60	-0 7.16	+ 9.56	-2.85	-27.20	0 56 23.31	50 28 53.1
0 59 54.7	9.5	0 58.04	0 40.4	28 38.95	+13.63	-0 7.16	+10.14	-2.93	-27.10	1 1 5.46	50 47 36.6
1 7 2.6	9.2	8 8.03	7 52.5	23 3.60	+11.98	-0 7.15	+10.18	-3.02	-26.80	1 8 15.62	50 53 9.7
1 8 46.9	9.7	9 51.13	9 33.0	59 21.75	+14.17	-0 7.16	+ 9.57	-3.03	-26.60	1 9 58.71	50 16 53.1
1 10 11.9	8.6	11 16.21	10 55.8	18 22.40	+15.74	-0 7.15	+10.18	-3.07	-26.60	1 11 23.87	50 57 54.5
1 11 56.6	7.8	13 0.20	12 46.2	19 55.25	+10.81	-0 7.15	+10.52	-3.09	-26.50	1 13 7.90	50 56 16.9
1 13 18.8	9.0	14 23.39	14 7.0	19 13.50	+12.93	-0 7.17	+ 9.20	-3.08	-26.20	1 14 31.04	49 56 59.5
1 15 24.9	9.5	16 28.52	16 12.7	17 35.85	+12.45	-0 7.17	+ 9.03	-3.11	-26.10	1 16 36.22	49 58 36.4
1 19 31.7	8.5	20 37.30	20 49.5	11 56.90	- 9.59	-0 7.17	+ 9.00	-3.16	-26.00	1 20 45.08	50 3 52.7
1 21 54.8	8.0	22 59.33	22 43.4	14 48.55	+12.51	-0 7.17	+ 9.39	-3.19	-25.90	1 23 7.15	50 0 23.3
1 23 38.0	8.6	24 43.41	24 26.6	5 24.40	+13.18	-0 7.17	+ 8.83	-3.22	-25.80	1 24 51.28	50 10 47.4
1 27 48.3	8.9	28 53.90	28 40.1	14 21.55	+10.63	-0 7.15	+10.55	-3.30	-25.80	1 29 1.93	51 1 48.9
1 28 56.6	9.0	30 2.08	29 50.0	18 2.00	+ 9.53	-0 7.17	+ 9.08	-3.28	-25.50	1 30 10.03	49 58 5.8
1 31 41.0	8.5	32 46.57	32 31.5	53 37.90	+11.80	-0 7.17	+ 9.63	-3.32	-25.40	1 32 54.61	50 22 32.4
1 33 38.8	8.9	34 45.47	34 28.2	0 20.25	+13.55	-0 7.18	+ 8.94	-3.34	-25.20	1 34 53.54	50 15 50.9
1 34 36.0	3.5	35 42.04	35 29.4	12 37.40	+ 9.91	-0 7.18	+ 9.09	-3.35	-25.20	1 35 50.09	50 3 30.1
1 35 22.5	9.5	36 29.45	36 22.5	47 34.70	+ 5.46	-0 7.17	+ 9.64	-3.37	-25.20	1 36 37.58	50 28 28.8
1 37 57.9	8.8	39 5.06	38 47.7	21 33.15	+13.44	-0 7.16	+ 9.96	-3.42	-25.10	1 39 13.29	50 55 38.3
1 39 21.4	9.7	40 28.84	40 16.3	46 14.15	+ 9.74	-0 7.17	+ 9.43	-3.42	-25.00	1 40 37.05	50 29 52.9
1 42 29.9	9.5	43 37.59	43 18.0	2 56.80	+15.36	-0 7.18	+ 9.26	-3.45	-24.70	1 43 45.82	50 13 15.4
1 43 36.1	6.5	44 43.52	44 33.7	24 42.70	+ 7.58	-0 7.17	+10.44	-3.49	-24.80	1 44 51.84	50 51 22.6
1 45 25.8	8.9	46 33.52	46 17.2	46 31.25	+12.70	-0 7.17	+ 9.46	-3.50	-24.60	1 46 41.84	50 29 38.0
1 47 19.8	8.9	48 28.09	48 11.7	15 23.50	+12.91	-0 7.18	+ 8.68	-3.50	-24.40	1 48 36.40	50 0 45.0
1 48 27.0	9.0	49 34.27	49 19.1	16 4.90	+11.97	-0 7.18	+ 8.80	-3.52	-24.40	1 49 42.59	50 0 2.6
1 50 7.0	9.2	51 15.19	51 4.0	16 38.80	+ 8.82	-0 7.18	+ 8.91	-3.54	-24.20	1 51 23.54	49 58 25.5
1 50 18.9	8.7	51 27.15	51 5.5	16 38.80	+17.09	-0 7.18	+ 8.81	-3.54	-24.20	1 51 35.51	49 59 33.5
1 51 52.4	9.0	52 59.23	52 39.7	14 38.80	+15.35	-0 7.18	+ 9.33	-3.56	-24.10	1 53 7.62	50 1 32.2
1 53 1.8	9.0	54 10.82	53 57.6	34 18.80	+10.24	-0 7.17	+10.11	-3.60	-24.10	1 54 19.31	50 41 47.6
1 54 3.7	8.2	55 11.99	55 2.8	13 9.20	+ 7.08	-0 7.16	+10.40	-3.63	-24.10	1 55 20.54	51 2 54.1
1 55 32.2	9.3	56 41.52	56 25.0	35 57.35	+12.81	-0 7.17	+ 9.52	-3.63	-23.90	1 56 50.05	50 40 10.7
1 57 16.1	8.7	58 23.75	58 8.5	22 30.00	+11.82	-0 7.16	+10.10	-3.67	-23.90	1 58 32.34	50 53 37.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
2 0 27.2	8.6	1 36.81	1 27.4	11 46.95	+ 7.18	-0 7.16	+10.22	-3.71	-23.70	2 1 45.48	51 4 15.5
2 1 40.5	8.5	2 50.34	2 37.5	14 52.65	+ 9.86	-0 7.16	+10.64	-3.72	-23.60	2 2 59.04	51 1 12.5
2 3 59.4	6.0	5 9.26	4 57.5	46 59.10	+ 9.20	-0 7.17	+ 9.53	-3.72	-23.30	2 5 17.94	50 29 4.1
2 5 48.8	9.0	6 58.94	6 47.0	7 4.65	+ 9.34	-0 7.18	+ 9.12	-3.72	-23.10	2 7 7.62	50 8 58.0
2 11 49.4	8.5	13 0.13	12 48.0	33 5.70	+ 9.38	-0 7.17	+10.01	-3.82	-22.80	2 13 8.98	50 42 56.8
2 13 17.1	8.7	14 28.77	14 15.2	48 11.95	+10.60	-0 7.17	+ 9.68	-3.82	-22.60	2 14 37.62	50 27 51.3
2 14 7.9	8.5	15 19.98	15 6.4	56 5.10	+10.63	-0 7.17	+ 9.21	-3.83	-22.60	2 15 28.83	50 19 57.5
2 15 41.7	8.8	16 53.08	16 36.7	35 20.90	+12.74	-0 7.17	+ 9.45	-3.87	-22.50	2 17 1.98	50 40 43.8
2 18 3.8	8.9	19 14.51	19 31.7	22 42.55	-13.29	-0 7.17	+10.09	-3.90	-22.40	2 19 23.49	50 52 56.2
2 20 14.7	9.0	21 26.91	21 11.9	22 17.75	+11.59	-0 7.17	+10.07	-3.93	-22.20	2 21 35.92	50 53 45.5
2 21 30.7	8.9	22 41.30	22 24.8	30 14.35	+12.79	-0 7.17	+ 9.50	-3.93	-22.10	2 22 50.33	50 45 49.3
2 25 21.8	9.0	26 33.91	26 16.2	37 42.55	+13.75	-0 7.17	+ 9.77	-3.97	-21.80	2 26 42.99	50 38 21.7
2 28 23.9	6.5	29 34.85	29 21.7	19 9.05	+10.32	-0 7.18	+ -9.23	-3.96	-21.40	2 29 43.89	49 56 50.8
2 29 38.5	9.7	30 50.93	30 36.1	6 14.85	+11.62	-0 7.18	+ 8.98	-3.99	-21.30	2 31 0.16	50 9 45.8
2 31 11.8	9.0	32 24.37	32 8.1	17 32.60	+12.57	-0 7.16	+10.05	-4.05	-21.40	2 32 33.60	50 58 29.6
2 32 32.7	8.5	33 44.23	33 25.8	9 57.95	+14.46	-0 7.18	+ 8.66	-4.01	-21.10	2 33 53.36	50 6 4.7
2 33 34.5	8.5	34 48.20	34 32.1	16 2.30	+12.41	-0 7.16	+ 9.98	-4.08	-21.20	2 34 57.48	50 59 59.2
2 34 57.7	9.0	36 10.02	35 51.5	16 9.00	+14.57	-0 7.18	+ 9.76	-4.03	-20.90	2 36 19.18	49 59 54.4
2 35 45.1	8.5	36 57.96	36 45.3	11 14.80	+ 9.99	-0 7.18	+ 8.89	-4.05	-20.80	2 37 7.13	50 4 43.0
2 37 25.5	8.7	38 38.53	38 20.0	21 15.10	+14.29	-0 7.16	+ 9.88	-4.11	-20.80	2 38 47.87	50 54 47.5
2 38 30.2	6.8	39 43.65	39 32.8	53 35.95	+ 8.46	-0 7.17	+ 9.69	-4.09	-20.60	2 39 52.93	50 22 20.5
2 41 8.0	...	42 21.01	42 11.0	58 0.70	+ 7.82	-0 7.17	+ 9.50	-4.11	-20.40	2 42 30.32	50 17 54.4
2 43 13.9	8.3	44 27.38	44 10.0	44 58.85	+13.56	-0 7.17	+ 9.19	-4.15	-20.20	2 44 36.75	50 31 1.3
2 44 17.8	6.5	45 31.15	45 20.0	36 39.50	+ 8.70	-0 7.17	+ 9.68	-4.17	-20.10	2 45 40.56	50 39 16.1
2 45 22.7	8.0	46 35.86	46 23.1	41 53.20	+ 9.96	-0 7.17	+ 9.60	-4.17	-20.00	2 46 45.28	50 34 3.3
2 46 43.0	6.0	47 56.10	47 43.0	30 39.90	+10.15	-0 7.17	+ 9.60	-4.29	-19.70	2 48 5.47	50 45 16.7
2 47 58.5	9.0	49 13.05	48 56.3	48 22.15	+13.02	-0 7.17	+ 9.70	-4.29	-19.80	2 49 22.40	50 27 37.0
ZONE 15, DECEMBER 22, 1870.											
3 21 54.5	9.2	23 12.10	22 54.6	1 39.10	+13.71	-0 7.20	+ 9.11	-4.49	-16.50	3 23 21.99	50 14 13.7
3 32 35.5	9.4	33 53.52	33 33.0	50 25.20	+16.00	-0 7.19	+ 9.15	-4.59	-15.40	3 34 3.60	50 25 27.4
3 33 38.0	9.0	34 51.56	35 5.0	21 47.00	-10.58	-0 7.20	+ 8.23	-4.56	-15.30	3 35 1.56	49 53 37.8
3 35 58.4	9.2	37 16.40	36 49.0	27 24.20	+21.21	-0 7.19	+ 9.85	-4.64	-15.20	3 37 26.59	50 48 33.3
3 37 55.5	8.0	39 13.00	38 51.4	16 36.50	+16.66	-0 7.18	+10.01	-4.67	-15.00	3 39 23.25	50 59 16.2
3 38 59.8	8.8	40 18.82	39 24.8	27 43.50	+41.81	-0 7.18	+ 9.91	-4.66	-14.80	3 40 29.06	50 48 33.9
3 40 25.3	9.0	41 45.72	.....	.....	.....	-0 7.18	.....	-4.70	.....	3 41 55.99	.....
3 41 41.9	7.8	43 0.32	42 47.6	16 3.00	+ 9.79	-0 7.18	+10.02	-4.70	-14.50	3 43 10.62	50 59 41.8
3 42 57.8	7.6	44 16.04	44 6.9	41 30.95	+ 7.08	-0 7.19	+ 9.58	-4.68	-14.40	3 44 26.27	50 34 10.4
3 44 3.3	8.0	45 21.58	44 59.3	17 25.65	+17.57	-0 7.20	+ 8.88	-4.72	-14.20	3 45 31.65	49 58 25.3
3 46 32.6	8.2	47 51.80	47 28.2	46 22.15	+18.39	-0 7.19	+ 9.35	-4.69	-14.00	3 48 2.07	50 29 29.3
3 49 2.4	9.4	50 22.25	49 54.4	43 49.05	+21.64	-0 7.19	+ 9.72	-4.71	-13.70	3 50 32.56	50 32 5.5
3 51 3.0	7.8	52 21.53	52 5.6	58 43.30	+12.44	-0 7.19	+ 9.56	-4.71	-13.60	3 52 31.82	50 17 1.2
3 52 56.6	9.0	54 16.40	53 49.5	46 54.10	+20.97	-0 7.19	+ 9.37	-4.74	-13.30	3 54 26.74	50 28 58.3
3 53 57.8	8.5	55 18.65	55 4.4	32 0.15	+11.01	-0 7.19	+ 9.66	-4.76	-13.20	3 55 29.05	50 43 42.2
3 55 56.8	8.0	57 15.70	56 54.0	1 41.50	+17.00	-0 7.20	+ 9.07	-4.75	-12.90	3 57 26.02	50 14 5.9
4 0 12.2	7.5	1 31.38	1 4.8	17 11.10	+20.95	-0 7.20	+ 8.79	-4.75	-12.40	4 1 41.71	49 58 38.9
4 1 42.2	8.3	3 1.01	2 39.4	38 31.45	+16.79	-0 7.19	+ 9.85	-4.80	-12.30	4 3 11.48	50 37 14.9
4 3 42.6	9.0	5 2.81	4 39.7	53 19.75	+18.05	-0 7.19	+ 9.52	-4.80	-12.00	4 5 13.26	50 22 27.1
4 5 4.2	8.8	6 23.87	6 8.2	44 0.20	+12.22	-0 7.19	+ 9.87	-4.82	-11.90	4 6 34.36	50 31 40.7
4 12 22.3	8.0	13 42.50	13 20.5	46 24.45	+17.15	-0 7.19	+ 9.36	-4.86	-11.10	4 13 53.06	50 29 18.9
4 13 32.9	7.5	14 53.16	14 36.0	42 30.30	+13.39	-0 7.19	+ 9.65	-4.86	-11.00	4 15 3.75	50 33 9.2
4 14 47.2	8.3	16 8.77	15 51.3	12 53.75	+13.48	-0 7.18	+10.32	-4.91	-10.90	4 16 19.47	51 2 46.1
4 15 56.3	7.0	17 16.98	17 6.4	20 27.20	+ 8.19	-0 7.18	+ 9.85	-4.90	-10.70	4 17 27.68	50 55 6.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
4 17 17.4	8.0	18 37.84	18 15.6	51 36.50	+17.33	-0 7.19	+ 9.31	-4.87	-10.50	4 18 48.44	50 24 5.6
4 18 30.1	7.8	19 51.52	19 32.9	55 55.45	+14.54	-0 7.19	+ 9.14	-4.87	-10.40	4 20 2.12	50 19 43.4
4 19 36.4	9.0	20 56.70	20 41.2	18 38.75	+12.21	-0 7.20	+ 9.13	-4.85	-10.10	4 21 7.23	49 56 57.6
4 22 10.7	8.2	23 31.56	23 14.5	28 53.75	+13.24	-0 7.19	+10.18	-4.94	- 9.90	4 23 42.26	50 46 43.8
4 23 34.0	7.3	24 54.81	24 37.4	31 20.15	+13.49	-0 7.19	+ 9.67	-4.94	- 9.80	4 25 5.52	50 44 16.7
4 28 32.8	8.0	29 55.21	29 32.2	18 14.45	+17.75	-0 7.18	+10.00	-4.97	- 9.20	4 30 6.03	50 57 25.6
4 32 8.4	8.4	33 30.09	33 5.7	43 25.35	+19.00	-0 7.18	+ 9.71	-4.96	- 8.80	4 33 40.85	50 32 14.6
4 33 26.2	8.5	34 46.36	34 28.1	7 46.85	+14.36	-0 7.19	+ 9.18	-4.93	- 8.60	4 34 57.05	50 7 47.6
4 35 15.8	7.6	36 37.45	36 14.4	23 50.65	+17.86	-0 7.18	+10.21	-4.99	- 8.40	4 36 48.31	50 51 47.8
4 36 28.9	8.0	37 50.48	37 28.6	55 15.85	+17.12	-0 7.18	+ 9.03	-4.96	- 8.20	4 38 1.25	50 20 20.3
4 37 28.8	9.0	38 49.88	38 40.9	51 27.20	+ 7.03	-0 7.18	+ 9.40	-4.97	- 8.10	4 39 0.67	50 23 59.0
4 38 41.6	9.2	40 2.65	39 48.4	3 50.05	+11.13	-0 7.19	+ 9.45	-4.96	- 7.90	4 40 13.39	50 11 40.0
4 42 31.8	8.7	43 53.08	43 39.8	51 40.10	+10.38	-0 7.18	+ 9.40	-5.00	- 7.50	4 44 3.90	50 23 47.8
4 42 44.9	8.7	44 6.36	43 29.0	51 40.10	+29.20	-0 7.18	+ 9.15	-5.00	- 7.40	4 44 17.18	50 24 6.5
4 44 11.9	9.0	45 32.78	45 14.3	55 48.15	+14.46	-0 7.18	+ 9.62	-5.00	- 7.30	4 45 43.59	50 19 43.7
4 45 53.2	8.8	47 15.25	46 54.8	17 8.35	+15.73	-0 7.17	+10.08	-5.06	- 7.10	4 47 26.21	50 58 24.7
4 49 34.0	8.8	50 55.85	50 37.2	17 45.35	+14.35	-0 7.17	+10.20	-5.07	- 6.70	4 51 6.83	50 57 45.3
4 50 40.4	8.6	52 1.80	51 47.6	26 14.10	+10.99	-0 7.18	+ 9.82	-5.06	- 6.50	4 52 12.76	50 49 12.6
4 51 36.6	8.5	52 58.26	52 47.9	50 10.10	+ 8.11	-0 7.18	+ 9.19	-5.03	- 6.40	4 53 9.15	50 25 12.8
4 53 2.7	8.5	54 25.16	54 9.4	55 53.60	+12.35	-0 7.18	+ 9.17	-5.03	- 6.20	4 54 36.04	50 19 33.1
4 54 20.9	8.8	55 43.82	55 31.2	22 53.65	+ 9.95	-0 7.19	+ 8.79	-5.01	- 5.60	4 55 54.60	49 52 30.3
4 55 47.3	7.5	57 8.87	56 49.7	52 11.35	+14.99	-0 7.18	+ 9.42	-5.04	- 5.90	4 57 19.78	50 23 17.4
4 57 14.4	8.2	58 36.87	58 14.5	39 34.50	+17.42	-0 7.18	+ 9.99	-5.06	- 5.70	4 58 47.84	50 35 56.8
5 7 47.1	8.0	9 9.70	8 53.6	41 52.60	+12.53	-0 7.18	+ 9.58	-5.09	- 4.40	5 9 20.71	50 33 30.3
5 9 34.9	9.3	10 56.32	10 29.7	46 32.00	+20.73	-0 7.18	+ 9.31	-5.10	- 4.20	5 11 7.32	50 28 58.2
5 20 31.7	7.8	21 53.82	21 31.8	19 40.60	+16.98	-0 7.17	+10.43	-5.15	- 2.80	5 22 4.97	50 55 43.7
5 21 39.3	7.8	23 0.15	22 40.0	47 34.45	+15.75	-0 7.18	+ 9.55	-5.12	- 2.70	5 23 11.20	50 27 47.3
5 22 28.2	8.3	23 51.43	23 39.5	13 52.20	+ 9.36	-0 7.19	+ 9.29	-5.08	- 2.60	5 24 2.38	50 1 22.7
ZONE 16, DECEMBER 26, 1870.											
1 19 45.7	8.8	20 49.18	20 38.3	14 32.80	+ 8.40	-0 5.68	+10.52	-3.11	-26.40	1 20 58.60	51 1 50.4
1 21 54.8	8.6	22 57.67	22 41.1	15 3.35	+12.79	-0 5.68	+ 9.65	-3.14	-26.30	1 23 7.03	50 1 23.2
1 27 58.5	8.5	29 2.57	28 44.1	39 10.80	+14.38	-0 5.68	+ 9.91	-3.22	-25.90	1 29 12.11	50 37 17.2
1 31 22.0	8.6	32 25.88	32 16.0	59 21.40	+ 7.75	-0 5.69	+ 9.59	-3.24	-25.70	1 32 35.46	50 16 59.1
1 34 30.4	7.0	35 34.99	35 22.4	23 16.75	+ 9.74	-0 5.69	+10.10	-3.29	-25.60	1 35 44.70	50 53 5.8
1 38 6.5	8.5	39 11.94	38 58.4	2 22.75	+10.58	-0 5.69	+ 9.14	-3.33	-25.30	1 39 21.65	50 13 59.3
1 41 34.2	...	42 40.73	42 32.0	28 3.30	+ 6.73	-0 5.68	+10.01	-3.40	-25.20	1 42 50.55	50 48 15.2
1 45 40.0	8.5	46 46.88	46 35.1	2 20.55	+ 9.24	-0 5.69	+ 9.14	-3.41	-24.80	1 46 56.75	50 13 59.2
1 47 52.7	8.5	48 58.44	48 45.4	6 18.80	+10.20	-0 5.69	+ 8.89	-3.44	-24.70	1 49 8.34	50 10 1.3
1 50 7.0	9.3	51 13.42	51 0.7	.....	.....	-0 5.69	.....	-3.47	.....	1 51 23.33	.....
1 50 18.9	8.8	51 25.62	51 1.3	16 53.65	+19.14	-0 5.69	+ 8.68	-3.47	-24.50	1 51 35.54	49 59 34.9
1 50 36.9	8.6	51 43.40	.....	.....	.....	-0 5.69	.....	-3.46	.....	1 51 53.34	.....
1 54 21.8	9.0	55 29.62	55 10.6	18 53.25	+14.66	-0 5.68	+10.25	-3.55	-24.50	1 55 39.74	50 57 31.5
1 55 32.3	8.9	56 40.79	56 24.3	32 47.45	+12.80	-0 5.68	+ 9.81	-3.56	-24.30	1 56 50.89	50 43 35.0
1 57 21.7	9.0	58 28.22	58 2.4	15 7.45	+19.88	-0 5.68	+ 9.53	-3.59	-24.30	1 58 38.39	51 1 21.4
1 59 40.5	8.8	0 48.11	0 28.7	47 40.75	+15.13	-0 5.68	+ 9.45	-3.60	-24.00	2 0 58.26	50 28 42.8
1 59 40.5	9.0	0 48.27	0 29.2	47 40.75	+14.89	-0 5.68	+ 9.45	-3.60	-24.00	2 0 58.42	50 28 42.5
2 1 59.5	8.8	3 7.05	2 50.1	15 30.75	+13.31	-0 5.69	+ 8.50	-3.61	-23.80	2 3 17.19	50 0 50.0
2 5 48.8	9.7	6 57.42	6 42.8	7 21.65	+11.46	-0 5.69	+ 9.02	-3.66	-23.50	2 7 7.65	50 8 57.2

ZONE 17, DECEMBER 31, 1870.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
1 34 30.4	7.0	35 32.79	35 19.5	23 20.50	+10.28	-0 3.68	+ 9.99	-3.19	-25.90	1 35 44.61	50 53 3.9
1 38 6.5	8.5	39 9.88	38 57.8	2 24.05	+ 9.48	-0 3.68	+ 9.00	-3.22	-25.60	1 39 21.71	50 13 58.3
1 41 34.2	8.9	42 38.79	42 19.7	28 12.80	+14.79	-0 3.67	+ 9.84	-3.28	-25.50	1 42 50.74	50 48 15.1
1 45 40.0	8.7	46 44.80	46 26.2	2 28.85	+14.57	-0 3.60	+ 8.96	-3.32	-25.10	1 46 56.77	50 13 58.2
1 47 52.7	8.7	48 56.32	48 41.0	6 22.15	+12.00	-0 3.68	+ 8.69	-3.35	-25.00	1 49 8.32	50 10 1.1
2 1 59.5	8.9	3 5.25	2 50.4	15 31.00	+11.65	-0 3.68	+ 8.34	-3.51	-24.20	2 3 17.50	50 0 49.3
2 4 45.1	9.0	5 50.69	5 34.7	20 1.90	+12.61	-0 3.68	+ 8.14	-3.51	-23.80	2 6 3.01	49 56 19.0
2 5 48.8	8.7	6 55.18	6 39.5	7 22.80	+12.32	-0 3.67	+ 8.89	-3.56	-23.90	2 7 7.53	50 8 58.2
2 8 11.4	8.9	9 18.17	8 58.4	59 25.75	+15.50	-0 3.67	+ 9.43	-3.60	-23.90	2 9 30.56	50 16 58.4
2 9 22.5	9.0	10 28.33	10 13.0	20 17.05	+12.06	-0 3.67	+ 8.23	-3.60	-23.70	2 10 40.70	49 56 2.4
2 10 33.0	6.5	11 38.13	11 23.3	53 23.55	+11.56	-0 3.67	+ 9.41	-3.63	-23.70	2 11 50.57	50 22 56.3
2 13 36.4	8.9	14 44.12	14 26.0	33 30.55	+14.04	-0 3.66	+ 9.79	-3.68	-23.50	2 14 56.68	50 42 51.6
2 15 53.8	8.0	17 1.17	16 46.6	20 22.40	+11.51	-0 3.66	+ 9.40	-3.72	-24.10	2 17 13.62	49 55 55.7
2 18 10.6	6.5	19 16.73	19 0.0	15 46.00	+13.15	-0 3.67	+ 8.39	-3.71	-23.10	2 19 29.26	50 0 33.1
2 20 19.0	8.8	21 26.74	21 10.7	15 4.50	+12.33	-0 3.66	+ 9.42	-3.78	-23.20	2 21 39.43	51 1 14.2
2 28 57.0	8.4	30 4.81	29 47.0	3 14.50	+13.95	-0 3.67	+ 9.11	-3.84	-22.30	2 30 17.54	50 13 4.1
2 31 59.1	9.4	33 8.14	32 45.9	42 33.10	+17.28	-0 3.66	+ 9.35	-3.89	-22.20	2 33 20.98	50 33 48.4
2 36 25.3	8.2	37 33.95	37 20.5	10 54.65	+10.53	-0 3.67	+ 8.52	-3.93	-21.70	2 37 46.78	50 5 18.5
2 38 00.0	8.0	39 9.54	38 57.3	14 38.75	+ 9.40	-0 3.66	+10.44	-3.99	-21.80	2 39 22.54	51 1 34.7
2 43 8.6	9.2	44 18.78	43 58.8	44 55.50	+15.58	-0 3.66	+ 9.85	-4.02	-21.30	2 44 31.79	50 31 22.6
2 43 13.9	8.6	44 23.72	44 31.1	44 58.00	- 5.76	-0 3.66	+ 9.95	-4.02	-21.30	2 44 36.73	50 30 58.8
2 44 52.6	8.4	46 2.37	45 46.6	47 57.75	+12.32	-0 3.67	+ 9.42	-4.03	-21.10	2 46 15.40	50 28 16.4
2 46 43.8	8.1	47 53.21	47 35.7	58 56.00	+13.70	-0 3.67	+ 9.39	-4.05	-21.00	2 48 6.23	50 17 19.0
2 52 44.0	9.0	53 53.53	53 35.8	58 45.50	+13.85	-0 3.67	+ 9.38	-4.11	-20.50	2 54 6.64	50 17 28.3
3 0 19.8	9.2	1 31.84	1 15.6	16 31.35	+12.49	-0 3.65	+ 9.71	-4.23	-19.90	3 1 45.19	50 59 39.7
3 1 12.1	8.9	2 23.28	2 45.2	39 5.95	-17.03	-0 3.65	+ 9.75	-4.22	-19.80	3 2 36.58	50 36 35.4
3 2 53.0	9.2	4 4.44	3 51.7	17 6.35	+10.00	-0 3.66	+ 9.69	-4.20	-19.50	3 4 17.67	49 59 1.8
3 5 11.9	8.7	6 22.83	6 7.3	48 40.70	+12.09	-0 3.65	+ 9.54	-4.25	-19.40	3 6 36.17	50 27 28.8
3 5 29.2	7.0	6 39.41	6 55.4	46 20.80	-12.47	-0 3.65	+ 9.08	-4.25	-19.40	3 6 52.76	50 29 23.6
3 9 42.4	7.0	10 54.46	10 42.9	45 21.65	+ 9.03	-0 3.63	+ 8.91	-4.30	-19.00	3 11 7.89	50 30 43.1
3 10 35.9	9.0	11 47.73	11 41.4	43 44.10	+ 4.90	-0 3.65	+ 9.71	-4.31	-18.90	3 12 1.16	50 32 17.1

ZONE 18, DECEMBER 31, 1870.

3 37 39.5	6.0	38 52.33	38 38.8	55 10.80	+10.55	-0 3.67	+ 9.19	-4.55	-16.20	3 39 6.05	50 20 49.9
3 38 42.3	7.5	39 57.07	39 47.6	42 58.90	+ 7.39	-0 3.66	+ 9.54	-4.57	-16.20	3 40 10.85	50 32 58.7
3 40 25.3	9.2	41 42.06	41 25.3	17 25.45	+12.95	-0 3.66	+ 9.87	-4.62	-16.00	3 41 55.93	50 58 37.6
3 41 41.9	9.0	42 56.76	42 41.7	16 20.35	+11.64	-0 3.66	+ 9.67	-4.63	-15.90	3 43 10.65	50 59 40.8
3 42 57.8	8.3	44 12.46	43 59.6	41 45.40	+10.04	-0 3.66	+ 9.28	-4.60	-15.70	3 44 26.30	50 34 13.5
3 44 3.3	8.4	45 18.06	45 4.9	17 34.85	+10.40	-0 3.67	+ 9.94	-4.65	-15.70	3 45 31.73	49 58 24.7
3 46 32.6	9.0	47 48.30	47 29.0	46 33.90	+15.04	-0 3.67	+ 9.11	-4.63	-15.40	3 48 2.15	50 29 28.9
3 49 2.4	9.3	50 18.57	49 55.0	43 59.90	+18.37	-0 3.67	+ 9.63	-4.66	-15.10	3 50 32.45	50 32 6.1
3 50 50.0	8.8	52 4.27	51 46.8	53 33.55	+13.67	-0 3.69	+ 8.43	-4.66	-14.90	3 52 18.12	50 22 26.1
3 52 56.6	9.4	54 12.76	53 55.6	47 2.45	+13.41	-0 3.68	+ 9.22	-4.69	-14.70	3 54 26.66	50 28 57.1
3 54 18.4	8.6	55 34.07	55 14.8	31 45.80	+14.96	-0 3.68	+ 9.42	-4.71	-14.60	3 55 48.04	50 44 15.1
3 55 56.8	8.9	57 12.26	56 47.1	1 57.95	+19.73	-0 3.69	+ 8.80	-4.69	-14.40	3 57 26.15	50 14 6.7
4 0 12.2	8.7	1 27.76	1 8.6	17 19.20	+15.12	-0 3.69	+ 8.66	-4.71	-13.80	4 1 41.64	49 58 39.7
4 4 11.6	8.7	5 28.16	5 6.9	20 21.30	+16.44	-0 3.68	+ 9.36	-4.80	-13.60	4 5 42.26	50 55 38.4
4 5 41.4	8.8	6 55.09	6 37.1	57 18.70	+14.08	-0 3.69	+ 9.08	-4.77	-13.30	4 7 9.09	50 18 38.0
4 9 13.5	6.0	10 29.81	10 11.3	39 3.15	+14.38	-0 3.69	+ 9.80	-4.82	-13.00	4 10 43.89	50 36 53.5
4 10 56.8	9.8	12 13.36	11 50.3	36 42.50	+17.94	-0 3.69	+ 9.26	-4.83	-12.80	4 12 27.47	50 39 16.7

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
4 12 22.3	8.8	13 38.86	13 15.7	46 38.45	+18.08	-0 3.69	+ 9.07	-4.83	-12.60	4 13 52.95	50 29 20.3
4 13 51.2	8.0	15 9.22	14 52.1	42 45.10	+13.31	-0 3.69	+ 9.46	-4.84	-12.40	4 15 23.34	50 33 8.9
4 15 3.1	9.0	16 20.72	15 59.0	2 47.75	+17.01	-0 3.70	+ 9.00	-4.83	-12.20	4 16 34.77	50 13 9.2
4 16 26.5	8.8	17 43.75	17 25.0	49 59.00	+14.67	-0 3.70	+ 8.90	-4.86	-12.10	4 17 57.85	50 25 55.1
4 17 22.9	8.5	18 41.42	18 26.5	16 13.00	+11.49	-0 3.69	+ 9.65	-4.91	-12.10	4 18 55.64	50 59 38.2
4 23 34.0	7.3	24 51.23	24 29.0	31 37.35	+17.21	-0 3.69	+ 9.34	-4.92	-11.30	4 25 5.46	50 44 17.7
4 24 45.8	8.3	26 2.47	25 42.9	55 4.35	+15.32	-0 3.70	+ 8.61	-4.90	-11.10	4 26 16.62	50 20 47.8
4 28 33.6	8.0	29 51.58	29 33.0	18 25.85	+14.35	-0 3.69	+10.06	-4.97	-10.80	4 30 5.90	50 57 25.5
4 32 11.8	8.5	33 29.86	33 9.6	42 42.50	+15.80	-0 3.70	+ 9.39	-4.96	-10.30	4 33 44.11	50 33 8.6
4 33 35.4	8.6	34 53.21	34 34.3	58 4.70	+14.79	-0 3.71	+ 9.22	-4.95	-10.10	4 35 7.41	50 17 44.9
4 35 30.8	8.4	36 49.40	36 29.1	17 4.75	+15.65	-0 3.70	+ 9.80	-5.02	-10.00	4 37 3.75	50 58 45.6
4 36 38.8	9.2	37 57.54	37 41.7	17 6.60	+12.18	-0 3.70	+ 9.84	-5.03	- 9.90	4 38 11.89	50 58 40.0
4 40 6.0	9.2	41 24.05	40 57.6	0 0.85	+20.67	-0 3.71	+ 8.41	-4.99	- 9.30	4 41 38.28	50 15 52.2
4 41 2.7	8.8	42 20.58	42 7.5	39 29.85	+10.20	-0 3.70	+ 9.83	-5.01	- 9.20	4 42 34.90	50 36 13.6
4 42 31.8	8.3	43 49.70	43 40.9	51 48.55	+ 6.87	-0 3.71	+ 9.15	-5.01	- 9.00	4 44 3.98	50 23 50.4
4 42 44.9	...	44 2.92	43 33.2	51 48.55	+23.19	-0 3.71	+ 8.94	-5.01	- 9.00	4 44 17.20	50 24 6.5
4 44 11.9	8.6	45 29.30	45 11.5	56 1.95	+13.92	-0 3.71	+ 8.82	-5.01	- 8.80	4 45 43.57	50 19 43.3
4 46 32.9	8.8	47 52.20	47 30.9	28 57.75	+16.50	-0 3.70	+10.07	-5.07	- 8.50	4 48 6.58	50 46 50.7
4 50 11.8	8.3	51 28.96	51 10.9	11 38.10	+14.24	-0 3.71	+ 9.00	-5.02	- 8.10	4 51 43.22	50 4 5.0
4 52 7.0	9.0	53 22.90	53 2.0	25 14.85	+16.16	-0 3.71	+ 9.21	-5.09	- 8.00	4 53 37.32	50 50 30.5
4 53 32.9	8.5	54 50.78	54 30.1	5 46.55	+16.24	-0 3.71	+ 8.52	-5.05	- 7.70	4 55 5.06	50 9 57.9
4 56 12.9	7.3	57 29.64	57 15.4	7 38.20	+11.15	-0 3.71	+ 8.95	-5.06	- 7.40	4 57 43.92	50 8 0.8
4 57 14.4	8.6	58 33.35	58 19.8	39 42.70	+10.47	-0 3.71	+ 9.95	-5.10	- 7.30	4 58 47.75	50 35 56.3
.....	8.8	3 3.35	3 28.8	20 56.45	-19.69	-0 3.71	+ 9.38	-5.14	- 6.80	5 3 17.83	50 54 10.2
5 8 31.2	8.0	9 49.47	9 27.1	22 25.30	+17.23	-0 3.71	+ 9.74	-5.17	- 5.90	5 10 3.97	50 53 16.9
5 9 56.0	8.3	11 14.13	10 53.8	0 7.80	+15.89	-0 3.72	+ 8.48	-5.12	- 5.70	5 11 28.51	50 15 31.3
5 12 16.1	8.0	13 35.07	13 17.3	9 54.00	+13.98	-0 3.72	+ 9.38	-5.12	- 5.50	5 13 49.42	50 5 43.4
5 13 35.3	7.8	14 53.65	14 38.0	23 55.70	+12.06	-0 3.72	+10.10	-5.18	- 5.40	5 15 8.16	50 51 40.0
5 20 27.0	8.3	21 45.81	21 28.0	59 5.20	+13.93	-0 3.73	+ 9.44	-5.17	- 4.50	5 22 0.20	50 16 29.6
5 21 39.3	...	22 56.83	22 41.8	47 44.15	+11.70	-0 3.73	+ 9.36	-5.19	- 4.30	5 23 11.26	50 27 48.0
5 22 28.2	9.0	23 47.99	23 38.6	14 2.75	+ 7.40	-0 3.73	+ 9.15	-5.15	- 4.20	5 24 2.33	50 1 24.7
5 24 12.3	9.5	25 31.19	25 15.4	4 17.30	+12.39	-0 3.73	+ 9.37	-5.17	- 4.00	5 25 45.58	50 11 14.8
5 26 58.8	8.8	28 18.34	27 57.6	15 0.05	+15.95	-0 3.72	+ 9.35	-5.24	- 3.70	5 28 32.92	51 0 34.7
5 27 54.2	9.0	29 15.52	28 11.0	15 41.60	+ 3.54	-0 3.73	+ 8.43	-5.16	- 3.50	5 29 29.88	49 59 39.6
5 32 3.6	7.8	33 21.77	33 7.3	37 8.25	+11.26	-0 3.73	+ 9.43	-5.22	- 3.00	5 33 36.27	50 38 20.4
ZONE 19, JANUARY 1, 1871.											
1 34 30.4	6.8	35 32.47	35 19.8	23 19.25	+ 9.81	-0 3.37	+10.26	+0.57	- 7.60	1 35 44.62	50 53 5.4
1 38 6.5	8.5	39 9.46	38 51.9	2 28.50	+13.79	-0 3.38	+ 9.22	+0.54	- 7.40	1 39 21.60	50 13 58.8
1 39 11.2	8.6	40 13.58	39 59.2	34 31.95	+11.06	-0 3.35	+10.26	+0.54	- 7.50	1 40 25.83	50 41 53.4
1 41 34.2	8.9	42 38.33	42 17.7	28 14.15	+15.95	-0 3.37	+10.07	+0.52	- 7.50	1 42 50.61	50 48 15.5
2 28 57.0	8.6	30 4.44	29 43.8	3 16.10	+16.15	-0 3.36	+ 9.37	+0.23	- 6.50	2 30 17.51	50 13 5.3
2 36 25.3	8.5	37 33.69	37 16.6	10 55.80	+13.44	-0 3.38	+ 8.78	+0.18	- 6.30	2 37 46.84	50 5 20.9
2 38 0.0	8.0	39 9.22	38 52.6	14 42.35	+10.94	-0 3.37	+10.72	+0.16	- 6.50	2 39 22.53	51 1 33.3
2 43 8.6	9.5	44 18.40	44 10.0	44 47.85	+ 6.54	-0 3.38	+10.18	+0.13	- 6.30	2 44 31.71	50 30 21.9
2 43 13.9	8.5	44 23.32	44 47.7	44 44.75	-19.00	-0 3.38	+10.00	+0.13	- 6.30	2 44 36.63	50 30 59.2
2 44 52.6	8.7	46 1.95	45 45.9	47 58.35	+12.48	-0 3.38	+ 9.67	+0.13	- 6.20	2 46 15.28	50 28 16.5
2 46 43.8	8.5	47 53.15	47 35.2	58 57.10	+14.09	-0 3.38	+ 9.68	+0.12	- 6.10	2 48 6.48	50 17 19.0
2 52 44.0	9.5	53 53.48	53 18.7	58 13.45	-19.72	-0 3.38	+ 9.42	+0.08	- 6.00	2 54 6.90	50 17 27.3
3 1 12.1	8.9	2 23.04	2 4.3	39 39.75	+14.54	-0 3.38	+10.17	+0.03	- 5.90	3 2 36.63	50 36 34.0

ZONE 20, JANUARY 7, 1871.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	° "	"	m s	"	s	"	h m s	° ' "
2 5 48.8	9.3	6 51.95	6 43.5	7 17.00	+ 6.59	-0 0.61	+ 9.35	+0.49	- 7.20	2 7 7.50	50 8 59.1
2 8 11.4	9.0	9 14.89	8 59.7	59 22.50	+11.90	-0 0.60	+ 9.97	+0.48	- 7.30	2 9 30.50	50 16 59.0
2 10 33.0	....	11 34.87	11 21.0	53 23.30	+10.86	-0 0.60	+ 9.90	+0.46	- 7.20	2 11 50.53	50 22 56.8
2 13 36.4	9.2	14 40.84	14 27.9	33 27.30	+10.00	-0 0.60	+10.19	+0.44	- 7.30	2 14 56.60	50 42 51.5
2 15 53.8	8.6	16 57.99	16 41.0	20 25.35	+13.40	-0 0.59	+ 9.83	+0.42	- 7.30	2 17 13.69	49 55 56.0
2 18 10.6	6.5	19 13.49	18 57.0	15 45.90	+12.99	-0 0.60	+ 8.80	+0.41	- 7.10	2 19 29.23	50 0 33.8
2 20 19.0	8.6	21 23.46	21 6.9	15 6.60	+12.79	-0 0.59	+ 9.85	+0.39	- 7.30	2 21 39.37	51 1 13.3
2 28 57.0	8.4	30 1.71	29 39.1	3 17.75	+17.71	-0 0.60	+ 9.56	+0.34	- 6.90	2 30 17.65	50 13 5.4
2 38 0.0	....	39 6.52	38 56.8	14 37.75	+ 7.47	-0 0.59	+10.98	+0.28	- 7.00	2 39 22.73	51 1 34.5
2 43 8.6	9.0	44 15.74	44 2.3	44 50.90	+10.44	-0 0.60	+10.40	+0.25	- 6.80	2 44 31.95	50 31 22.8
2 44 52.6	8.2	45 59.17	45 40.6	48 1.40	+14.50	-0 0.60	+ 9.86	+0.24	- 6.70	2 46 15.39	50 28 15.5
2 46 43.8	8.4	47 50.13	47 32.5	58 56.30	+13.78	-0 0.60	+ 9.89	+0.23	- 6.60	2 48 6.35	50 17 19.6
2 52 44.0	9.2	53 50.39	53 30.9	58 45.70	+15.26	-0 0.60	+ 9.86	+0.19	- 6.50	2 54 6.70	50 17 30.3
3 0 19.8	9.0	1 28.68	1 20.4	16 25.40	+ 6.40	-0 0.59	+10.19	+0.13	- 6.60	3 1 45.21	50 59 40.1
3 1 12.1	....	2 20.16	2 14.0	39 29.15	+ 4.82	-0 0.60	+10.47	+0.13	- 6.50	3 2 36.63	50 36 34.9
3 2 53.0	9.0	4 1.44	3 44.0	17 9.15	+13.70	-0 0.60	+ 9.12	+0.13	- 6.30	3 4 17.84	49 59 2.2
3 5 11.9	8.5	6 19.61	5 56.8	48 46.65	+17.78	-0 0.60	+ 9.99	+0.11	- 6.30	3 6 36.11	50 27 29.0
3 5 29.2	....	6 36.31	7 1.0	46 14.05	-19.24	-0 0.60	+ 9.81	+0.11	- 6.30	3 6 52.82	50 29 24.4
3 10 35.9	9.0	11 44.73	11 57.8	43 28.10	-10.20	-0 0.60	+10.11	+0.08	- 6.20	3 12 1.32	50 32 18.5

ZONE 21, JANUARY 7, 1871.

3 38 42.3	8.2	39 54.01	39 34.0	43 5.65	+15.57	-0 0.63	+ 9.96	-0.09	- 5.60	3 40 10.90	50 33 0.3
3 40 25.3	9.5	41 38.70	41 23.2	17 23.15	+11.95	-0 0.62	+10.35	-0.10	- 5.60	3 41 55.70	50 58 39.1
3 41 41.9	8.8	42 53.40	42 32.5	16 25.15	+16.11	-0 0.62	+10.08	-0.11	- 5.60	3 43 10.42	50 59 40.6
3 42 57.8	8.3	44 9.18	43 50.7	41 51.90	+14.39	-0 0.63	+ 9.72	-0.10	- 5.40	3 44 26.14	50 34 11.6
3 44 3.3	8.5	45 14.94	45 4.4	17 36.20	+ 8.27	-0 0.62	+10.43	-0.12	- 5.50	3 45 31.80	49 58 21.5
3 46 32.6	9.0	47 45.04	47 24.4	46 37.30	+16.06	-0 0.63	+ 9.54	-0.14	- 5.30	3 48 1.99	50 29 26.7
3 49 2.4	9.4	50 15.31	49 43.8	44 8.45	+24.52	-0 0.63	+10.03	-0.14	- 5.30	3 50 32.31	50 32 3.8
3 50 50.0	9.0	52 1.09	51 45.0	53 32.45	+12.58	-0 0.63	+ 9.91	-0.15	- 5.20	3 52 18.07	50 22 27.3
3 52 56.6	9.3	54 9.40	53 38.8	47 13.80	+23.85	-0 0.63	+ 9.56	-0.16	- 5.20	3 54 26.43	50 28 56.3
3 54 18.4	8.8	55 30.73	55 13.7	31 46.60	+13.18	-0 0.62	+ 9.89	-0.17	- 5.20	3 55 47.83	50 44 12.7
3 55 56.8	8.7	57 9.10	56 47.8	1 54.65	+16.69	-0 0.63	+ 9.27	-0.17	- 5.00	3 57 26.12	50 14 7.2
4 0 12.2	8.0	1 24.50	1 1.0	17 23.60	+18.51	-0 0.63	+ 9.08	-0.19	- 4.90	4 1 41.50	49 58 38.7
4 3 58.6	8.0	5 12.58	5 25.7	20 50.20	-10.11	-0 0.62	+ 9.94	-0.22	- 5.00	4 5 29.80	50 54 43.1
4 5 41.4	8.8	6 51.87	6 35.9	57 17.75	+12.51	-0 0.63	+ 9.55	-0.22	- 4.80	4 7 8.98	50 18 37.5
4 9 13.5	6.5	10 26.73	10 6.7	39 1.75	+15.54	-0 0.63	+10.26	-0.24	- 4.70	4 10 43.93	50 36 56.2
4 10 56.8	9.8	12 10.20	11 52.6	36 37.40	+13.67	-0 0.63	+ 9.69	-0.25	- 4.70	4 12 27.42	50 39 17.6
4 12 22.3	8.6	13 35.76	13 18.8	46 35.30	+13.25	-0 0.63	+ 9.58	-0.25	- 4.60	4 13 52.97	50 29 18.8
4 13 51.2	8.3	15 6.08	14 53.2	42 43.30	+10.04	-0 0.63	+ 9.93	-0.26	- 4.60	4 15 23.31	50 33 7.5
4 15 3.1	8.4	16 17.40	16 2.0	2 43.70	+12.07	-0 0.63	+ 9.51	-0.26	- 4.50	4 16 34.57	50 13 8.4
4 15 59.2	9.0	17 13.57	17 3.2	51 7.15	+ 8.12	-0 0.63	+ 9.41	-0.27	- 4.50	4 17 30.78	50 24 40.5
4 17 22.9	9.3	18 38.30	18 20.2	16 15.35	+13.95	-0 0.62	+10.10	-0.28	- 4.60	4 18 55.66	50 59 38.4
4 23 34.0	8.0	24 48.05	24 28.0	31 35.65	+15.50	-0 0.62	+ 9.81	-0.31	- 4.30	4 25 5.40	50 44 17.7
4 24 45.8	8.6	25 59.37	25 43.0	55 0.70	+12.82	-0 0.63	+ 9.04	-0.30	- 4.20	4 26 16.65	50 20 48.9
4 28 33.6	8.0	29 48.40	29 31.8	18 21.20	+12.81	-0 0.62	+10.58	-0.33	- 4.20	4 30 5.83	50 57 28.7
4 32 11.8	8.3	33 26.68	33 8.0	42 39.85	+14.55	-0 0.63	+ 9.88	-0.34	- 4.00	4 33 44.04	50 33 10.1
4 33 35.4	8.5	34 50.05	34 35.0	58 1.15	+11.74	-0 0.63	+ 9.72	-0.34	- 3.90	4 35 7.37	50 17 45.5
4 35 30.8	8.5	36 46.18	36 28.4	17 4.15	+13.73	-0 0.62	+10.29	-0.37	- 4.00	4 37 3.65	50 58 44.3
4 36 38.8	9.3	37 54.42	37 33.1	17 10.95	+16.50	-0 0.62	+10.29	-0.37	- 4.00	4 38 11.90	50 58 39.9
4 40 6.0	9.5	41 20.95	40 58.2	59 56.40	+17.85	-0 0.63	+10.00	-0.37	- 3.70	4 41 38.30	50 15 54.9

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	° "	"	m s	"	s	"	h m s	° ' "
4 41 2.7	8.4	42 17.36	42 9.9	39 26.35	+ 5.84	-0 0.63	+10.34	-0.38	- 3.70	4 42 34.78	50 36 12.8
4 42 31.8	8.3	43 46.64	43 32.3	51 53.30	+11.17	-0 0.63	+ 9.59	-0.39	- 3.60	4 44 4.02	50 23 49.9
4 42 44.9	....	43 59.74	43 24.6	51 53.30	+27.40	-0 0.63	+ 9.32	-0.39	- 3.60	4 44 17.12	50 24 5.9
4 44 11.9	8.7	45 26.24	45 6.9	56 1.80	+15.09	-0 0.63	+ 9.24	-0.39	- 3.60	4 45 43.62	50 19 44.5
4 46 32.9	8.3	47 49.10	47 27.7	28 55.95	+16.57	-0 0.62	+10.46	-0.41	- 3.60	4 48 6.59	50 46 52.3
4 50 11.8	8.3	51 25.62	51 7.2	11 40.25	+14.47	-0 0.63	+ 9.55	-0.41	- 3.30	4 51 42.97	50 4 4.1
4 53 32.9	7.8	54 47.52	54 32.8	5 41.95	+11.53	-0 0.63	+ 8.97	-0.42	- 3.30	4 55 4.91	50 9 57.7
4 57 14.4	9.0	58 30.35	58 12.8	39 46.30	+13.76	-0 0.63	+10.45	-0.45	- 3.20	4 58 47.84	50 35 55.9
....	9.5	3 0.25	3 23.0	20 57.50	-17.53	-0 0.62	+ 9.88	-0.47	- 3.10	5 3 17.82	50 54 11.3
5 3 37.3	8.8	4 52.98	4 33.6	30 21.85	+12.50	-0 0.62	+ 9.58	-0.47	- 3.00	5 5 10.54	50 45 16.3
5 8 31.2	8.2	9 46.37	9 29.6	22 22.50	+12.98	-0 0.62	+10.27	-0.49	- 2.90	5 10 3.96	50 53 15.3
5 12 16.1	8.2	13 31.89	13 13.7	9 53.15	+14.30	-0 0.63	+ 9.88	-0.48	- 2.60	5 13 49.33	50 5 44.6
5 13 35.3	8.0	14 50.53	14 31.2	23 56.90	+14.92	-0 0.62	+10.58	-0.51	- 2.70	5 15 8.12	50 51 41.6
5 20 27.0	8.0	21 42.63	21 27.2	59 4.55	+12.05	-0 0.63	+ 9.96	-0.52	- 2.30	5 22 0.12	50 16 28.4
5 21 39.3	8.0	22 53.65	22 35.2	47 47.15	+14.35	-0 0.63	+ 9.70	-0.52	- 2.30	5 23 11.18	50 27 47.4
5 22 28.2	8.6	23 44.89	23 31.0	14 5.15	+10.94	-0 0.63	+ 9.62	-0.51	- 2.20	5 24 2.33	50 1 25.8
5 24 12.3	9.5	25 28.11	25 11.8	4 16.35	+12.78	-0 0.63	+ 9.84	-0.52	- 2.10	5 25 45.59	50 11 16.1
5 26 58.8	8.3	28 15.36	27 49.4	15 4.75	+20.03	-0 0.62	+ 9.75	-0.55	- 2.10	5 28 33.02	51 0 34.0
5 27 54.2	8.3	29 12.36	29 43.5	15 12.20	-24.49	-0 0.63	+ 8.48	-0.53	- 1.90	5 29 29.80	49 59 40.6
5 32 3.6	7.8	33 18.57	32 54.0	37 18.05	+19.11	-0 0.63	+ 9.83	-0.56	- 1.90	5 33 36.14	50 38 18.2

ZONE 22, JANUARY 10, 1871.

2 37 41.5	8.9	38 47.09	38 30.8	28 33.60	+12.35	+0 0.74	+11.58	+0.33	- 7.30	2 39 4.79	51 47 44.3
2 38 56.5	9.0	40 2.85	39 45.7	7 56.55	+13.14	+0 0.73	+10.66	+0.33	- 7.20	2 40 20.47	51 8 21.1
2 40 23.0	9.0	41 29.09	41 11.3	57 29.25	+13.63	+0 0.73	+10.76	+0.32	- 7.20	2 41 46.76	51 18 48.6
2 41 13.7	8.3	42 18.64	42 11.4	22 2.00	+ 5.44	+0 0.74	+11.36	+0.31	- 7.20	2 42 36.42	51 54 8.1
2 42 45.5	9.8	43 52.40	43 30.6	9 51.55	+16.46	+0 0.74	+11.99	+0.30	- 7.20	2 44 10.21	51 56 29.9
2 43 40.0	8.2	44 44.61	44 33.4	43 47.95	+ 8.53	+0 0.74	+11.39	+0.30	- 7.20	2 45 2.35	51 32 24.8
2 45 10.4	9.0	46 16.96	45 58.6	30 56.85	+13.95	+0 0.74	+10.83	+0.29	- 7.20	2 46 34.78	51 45 20.3
2 47 5.1	8.2	48 11.50	47 50.3	16 39.00	+15.99	+0 0.74	+11.29	+0.27	- 7.30	2 48 29.39	51 59 40.1
2 49 46.1	8.9	50 52.31	50 35.4	9 15.25	+12.99	+0 0.73	+11.00	+0.26	- 7.00	2 51 10.09	51 7 0.3
2 50 33.7	6.8	51 40.51	51 54.9	24 42.60	-10.90	+0 0.74	+11.95	+0.25	- 7.00	2 51 58.43	51 51 9.8
2 52 35.5	9.6	53 42.22	53 22.0	31 18.50	+15.32	+0 0.74	+10.90	+0.24	- 7.00	2 54 0.16	51 44 58.6
2 53 40.2	9.5	54 47.64	54 55.9	14 39.00	- 6.26	+0 0.74	+12.18	+0.22	- 7.20	2 55 5.65	52 1 17.3
2 55 57.5	9.5	57 3.48	56 45.3	11 42.15	+14.01	+0 0.73	+10.28	+0.22	- 7.00	2 57 21.35	51 4 32.2
2 57 5.6	9.0	58 13.39	57 58.0	25 21.90	+11.65	+0 0.74	+10.86	+0.21	- 7.00	2 58 31.41	51 50 50.3
2 58 43.6	9.5	59 49.42	59 28.3	38 29.25	+16.04	+0 0.74	+11.37	+0.20	- 7.00	3 0 7.42	51 37 47.5
3 1 18.5	6.8	2 24.96	2 6.8	34 56.90	+13.82	+0 0.74	+11.77	+0.18	- 6.90	3 2 43.01	51 41 17.5
3 2 23.6	9.0	3 30.95	3 11.2	12 24.80	+14.83	+0 0.74	+11.53	+0.16	- 7.00	3 3 49.07	52 3 50.0
3 3 24.7	7.2	4 31.99	4 24.6	57 14.15	+ 5.67	+0 0.73	+10.75	+0.17	- 6.80	3 4 50.00	51 18 50.6
3 4 22.4	8.3	5 29.69	5 20.1	8 53.50	+ 7.38	+0 0.73	+10.95	+0.16	- 6.80	3 5 47.67	51 7 12.7
3 5 43.5	7.0	6 50.58	6 31.4	10 1.90	+14.77	+0 0.73	+ 9.89	+0.16	- 6.70	3 7 8.59	51 6 10.6
3 7 7.6	8.8	8 15.52	7 58.5	1 3.55	+13.03	+0 0.73	+10.36	+0.15	- 6.70	3 8 33.57	51 15 7.4
3 8 56.3	8.8	10 5.00	9 46.0	50 11.35	+14.51	+0 0.74	+10.31	+0.13	- 6.70	3 10 23.11	51 26 0.5
3 9 55.5	7.4	11 3.30	10 54.6	6 18.70	+ 6.68	+0 0.73	+10.34	+0.13	- 6.70	3 11 21.37	51 9 45.1
3 11 27.7	9.0	12 33.87	12 16.8	22 54.95	+12.93	+0 0.74	+11.51	+0.12	- 6.70	3 12 52.10	51 53 15.9
3 12 45.5	9.5	13 54.77	13 39.2	27 51.80	+11.82	+0 0.74	+11.42	+0.11	- 6.60	3 14 13.00	51 48 17.6
3 13 43.5	9.2	14 52.50	14 42.1	12 24.40	+ 7.83	+0 0.74	+11.63	+0.09	- 6.80	3 15 10.78	52 3 40.7
3 16 8.2	8.9	17 19.10	17 1.6	59 56.55	+13.41	+0 0.73	+11.30	+0.09	- 6.60	3 17 37.27	51 16 13.4

ZONE 23, JANUARY 17, 1871.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
2 21 31.7	9.0	22 33.64	22 14.7	31 16.15	+14.33	+0 3.56	+10.67	+0.61	- 7.80	2 22 54.05	51 45 5.9
2 23 24.3	8.4	24 25.00	24 12.7	30 57.65	+ 9.33	+0 3.56	+10.66	+0.60	- 7.80	2 24 45.45	51 45 19.0
2 25 44.7	9.0	26 44.81	26 30.9	32 5.95	+10.54	+0 3.56	+10.93	+0.58	- 7.80	2 27 5.29	51 44 11.7
2 28 5.0	9.4	29 5.61	28 53.5	7 26.70	+ 9.30	+0 3.55	+10.10	+0.57	- 7.60	2 29 26.04	51 8 48.6
2 29 51.8	9.3	30 53.83	30 35.0	58 50.30	+14.40	+0 3.55	+10.61	+0.55	- 7.60	2 31 14.31	51 18 30.3
2 32 2.9	8.4	33 5.26	32 47.5	39 26.20	+13.54	+0 3.55	+11.37	+0.53	- 7.70	2 33 25.81	51 36 53.7
2 36 44.9	9.2	37 47.41	37 32.3	46 54.95	+11.52	+0 3.55	+10.60	+0.50	- 7.70	2 38 8.02	51 29 21.1
2 37 41.5	8.5	38 44.23	38 29.5	28 31.75	+11.14	+0 3.56	+11.34	+0.50	- 7.60	2 39 4.92	51 47 44.5
2 38 56.5	9.2	39 59.91	39 43.1	7 55.35	+12.91	+0 3.55	+10.45	+0.49	- 7.50	2 40 20.51	51 8 21.6
2 40 23.0	9.0	41 26.23	41 5.0	57 30.95	+16.24	+0 3.55	+10.50	+0.48	- 7.50	2 41 46.88	51 18 49.1
2 41 13.7	8.1	42 15.72	42 5.0	22 3.55	+ 8.08	+0 3.56	+11.12	+0.47	- 7.50	2 42 36.48	51 54 8.7
2 42 45.5	9.6	43 49.54	43 27.2	19 51.70	+16.84	+0 3.56	+11.79	+0.46	- 7.50	2 44 10.33	51 56 29.7
2 43 40.0	8.3	44 41.71	44 28.5	43 49.70	+10.06	+0 3.56	+11.16	+0.45	- 7.50	2 45 2.42	51 32 24.1
2 45 10.4	9.0	46 14.10	45 59.0	30 52.65	+11.45	+0 3.56	+10.58	+0.44	- 7.50	2 46 34.89	51 45 21.6
2 47 5.1	8.3	48 8.66	47 55.2	16 32.45	+10.18	+0 3.56	+11.05	+0.42	- 7.70	2 48 29.52	51 59 40.3
2 49 46.1	8.8	50 49.35	50 34.0	9 13.55	+11.84	+0 3.56	+10.80	+0.41	- 7.40	2 51 10.11	51 7 0.3
2 50 33.7	6.5	51 37.49	51 31.8	24 56.50	+ 4.24	+0 3.57	+11.83	+0.40	- 7.50	2 51 58.39	51 51 10.5
2 52 35.5	9.0	53 39.20	53 23.6	31 14.80	+11.83	+0 3.57	+10.65	+0.39	- 7.40	2 54 0.12	51 44 58.2
2 53 40.2	9.0	54 44.76	54 36.3	14 53.05	+ 6.41	+0 3.57	+12.02	+0.38	- 7.60	2 55 5.76	52 1 15.4
2 55 57.5	8.7	57 0.62	56 46.3	11 36.95	+11.01	+0 3.56	+10.04	+0.37	- 7.40	2 57 21.47	51 4 33.8
2 57 5.6	8.7	58 10.57	57 55.0	25 22.60	+11.80	+0 3.57	+10.56	+0.36	- 7.40	2 58 31.57	51 50 49.2
2 58 43.6	9.0	59 46.44	59 30.2	38 25.90	+12.32	+0 3.57	+11.12	+0.35	- 7.40	3 0 7.42	51 37 46.6
3 1 18.5	7.0	2 22.04	2 5.9	34 55.95	+12.23	+0 3.57	+11.59	+0.33	- 7.40	3 2 43.07	51 41 16.3
3 2 23.6	8.9	3 28.09	3 14.8	12 18.75	+10.01	+0 3.57	+11.31	+0.31	- 7.50	3 3 49.19	52 3 50.6
3 3 24.7	8.2	4 29.11	4 12.3	57 20.10	+12.86	+0 3.56	+10.48	+0.31	- 7.30	3 4 50.09	51 18 51.2
3 4 22.4	8.5	5 26.79	5 14.4	8 55.15	+ 9.53	+0 3.56	+10.74	+0.31	- 7.30	3 5 47.75	51 7 12.8
3 5 43.5	8.0	6 47.80	6 33.8	9 57.80	+10.77	+0 3.56	+10.98	+0.30	- 7.30	3 7 8.78	51 6 11.3
3 7 7.6	9.0	8 12.64	7 56.1	1 2.35	+12.65	+0 3.56	+10.07	+0.29	- 7.30	3 8 33.66	51 15 7.4
3 8 56.3	9.0	10 2.06	9 41.4	50 12.00	+15.81	+0 3.57	+10.01	+0.28	- 7.20	3 10 23.15	51 26 0.5
3 9 55.5	7.3	11 0.42	10 47.7	6 21.85	+ 9.75	+0 3.56	+10.09	+0.27	- 7.20	3 11 21.46	51 9 44.4
3 11 27.7	8.9	12 30.95	12 14.9	22 53.75	+12.10	+0 3.57	+11.28	+0.26	- 7.10	3 12 52.15	51 53 15.7
3 12 45.5	9.4	13 51.97	13 32.8	27 54.10	+14.54	+0 3.57	+11.17	+0.25	- 7.10	3 14 13.17	51 48 17.4
3 13 43.5	8.5	14 49.58	14 36.7	12 25.40	+ 9.71	+0 3.57	+11.36	+0.24	- 7.30	3 15 10.84	52 3 41.0
3 15 3.2	9.2	16 9.60	15 47.0	41 39.20	+17.21	+0 3.58	+10.54	+0.23	- 7.30	3 16 30.79	51 34 33.5
3 16 8.2	8.0	17 16.14	16 58.0	59 57.15	+13.87	+0 3.57	+11.07	+0.23	- 7.00	3 17 37.29	51 16 12.7
3 31 48.8	8.0	32 56.13	33 16.7	21 52.20	-15.58	+0 3.58	+10.94	+0.12	- 7.10	3 33 17.59	51 53 43.7
3 33 9.7	9.0	34 18.58	34 4.6	11 55.70	+10.54	+0 3.58	+11.22	+0.10	- 7.10	3 34 40.07	52 4 5.7
3 41 59.2	9.0	43 6.24	42 49.8	9 53.90	+12.61	+0 3.57	+10.96	+0.06	- 6.70	3 43 27.64	51 6 7.7
3 43 26.7	8.7	44 34.92	44 20.9	5 29.35	+10.76	+0 3.58	+ 9.86	+0.05	- 6.70	3 44 56.36	51 10 28.9
3 44 44.2	8.8	45 51.61	45 35.0	22 37.60	+12.55	+0 3.59	+11.19	+0.03	- 6.90	3 46 13.20	51 53 23.2
3 46 29.1	9.2	47 38.47	47 15.5	27 43.40	+17.42	+0 3.59	+11.07	+0.02	- 6.80	3 48 0.06	51 48 21.7
3 48 0.3	7.4	49 7.71	48 53.4	7 47.95	+10.99	+0 3.58	+10.46	+0.02	- 6.60	3 49 29.18	51 8 9.9
3 50 4.7	8.5	51 13.87	51 0.3	27 27.55	+10.30	+0 3.59	+11.08	+0.00	- 6.70	3 51 35.51	51 48 29.5
3 51 14.9	9.0	52 22.55	52 5.0	57 20.40	+13.40	+0 3.58	+10.47	+0.00	- 6.50	3 52 44.09	51 18 39.0
3 52 34.8	9.0	53 43.62	53 25.2	45 43.20	+14.03	+0 3.59	+10.25	-0.01	- 6.60	3 54 5.22	51 30 16.1
3 54 10.4	9.7	55 19.35	55 11.9	37 18.90	+ 5.62	+0 3.59	+10.92	-0.03	- 6.50	3 55 40.98	51 38 32.3
3 55 51.0	9.0	57 0.48	56 41.0	30 18.75	+14.78	+0 3.59	+10.41	-0.04	- 6.50	3 57 22.15	51 45 40.6
4 1 37.4	9.2	2 46.86	2 28.5	20 48.95	+13.90	+0 3.59	+10.73	-0.08	- 6.50	4 3 8.61	51 55 8.1
4 2 42.3	9.2	3 52.86	3 36.0	20 13.00	+12.76	+0 3.59	+10.58	-0.09	- 6.50	4 4 14.62	51 55 42.4
4 5 33.5	8.7	6 42.37	6 29.7	12 8.25	+ 9.78	+0 3.58	+10.19	-0.09	- 6.20	4 7 3.98	51 3 43.2
4 6 42.7	9.0	7 52.51	7 35.0	18 56.10	+13.21	+0 3.60	+11.59	-0.11	- 6.40	4 8 14.32	51 56 59.6
4 8 42.7	9.0	9 52.99	9 32.1	28 17.15	+15.83	+0 3.60	+11.24	-0.12	- 6.30	4 10 14.79	51 47 40.3
4 11 21.0	9.1	12 29.78	12 40.3	44 55.55	- 8.00	+0 3.60	+11.45	-0.13	- 6.10	4 12 51.54	51 30 37.7

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
4 11 21.0	9.3	12 30.84	12 16.8	44 55.55	+10.75	+0 3.60	+11.43	-0.13	- 6.10	4 12 52.60	51 30 56.4
4 13 7.2	7.0	14 16.17	14 5.9	37 17.00	+ 7.83	+0 3.60	+10.89	-0.14	- 6.20	4 14 37.97	51 38 30.9
4 14 50.9	9.1	16 2.06	15 45.6	53 37.65	+12.62	+0 3.57	+10.90	-0.15	- 6.10	4 16 23.78	51 22 14.6
4 15 52.0	6.8	17 0.95	16 47.7	32 56.75	+10.02	+0 3.60	+11.11	-0.16	- 6.10	4 17 22.78	51 42 52.7
4 17 9.8	9.0	18 20.55	18 5.7	29 11.15	+11.21	+0 3.60	+11.51	-0.17	- 6.10	4 18 42.40	51 46 39.5
ZONE 24, JANUARY 17, 1871.											
4 39 5.7	8.5	40 16.87	39 57.3	19 55.70	+14.80	+0 3.56	+11.83	-0.30	- 5.50	4 40 38.84	51 55 52.8
4 43 24.7	9.0	44 35.63	44 12.6	1 52.70	+17.64	+0 3.55	+10.23	-0.31	- 5.30	4 44 57.46	51 13 55.8
4 46 34.2	8.8	47 43.92	47 17.3	20 51.30	+20.10	+0 3.56	+10.91	-0.34	- 5.30	4 48 5.92	51 54 59.3
4 47 42.5	7.8	48 54.00	48 34.0	31 2.20	+15.17	+0 3.56	+10.58	-0.34	- 5.20	4 49 15.96	51 44 42.9
4 49 32.6	8.8	50 42.85	50 26.2	57 19.15	+12.71	+0 3.55	+10.49	-0.34	- 5.10	4 51 4.72	51 18 22.9
5 9 45.5	...	10 57.77	10 38.7	58 38.25	+14.63	+0 3.56	+10.80	-0.44	- 4.50	5 11 19.70	51 16 59.8
5 11 14.2	8.6	12 26.97	12 8.7	9 46.50	+14.08	+0 3.56	+10.92	-0.44	- 4.40	5 12 48.87	51 5 50.7
5 12 16.2	...	13 38.32	13 24.8	14 11.10	+10.40	+0 3.56	+10.71	-0.45	- 4.40	5 14 0.19	51 1 21.8*
5 13 59.9	...	15 11.82	14 58.0	45 17.60	+10.52	+0 3.58	+10.20	-0.47	- 4.40	5 15 33.81	51 30 14.3
5 17 27.5	8.5	18 40.18	18 21.3	36 35.65	+14.36	+0 3.57	+10.63	-0.48	- 4.30	5 19 2.21	51 38 59.4
5 19 21.8	8.8	20 34.07	20 14.0	3 19.10	+15.42	+0 3.56	+10.62	-0.49	- 4.10	5 20 55.98	51 12 16.6
5 20 33.5	9.1	21 45.93	21 23.2	57 52.20	+17.39	+0 3.57	+10.57	-0.50	- 4.10	5 22 7.87	51 17 45.0
5 21 32.8	8.9	22 48.16	22 35.0	59 43.85	+10.12	+0 3.57	+11.11	-0.50	- 4.10	5 23 10.10	51 15 46.3
5 22 36.7	8.7	23 49.69	23 34.4	57 49.30	+11.72	+0 3.57	+10.63	-0.50	- 4.10	5 24 11.64	51 17 41.6
5 23 22.6	8.8	24 37.06	24 30.3	3 26.00	+ 5.22	+0 3.57	+10.73	-0.51	- 4.00	5 24 58.98	51 11 58.3
5 26 4.6	8.9	27 17.15	26 58.7	56 48.60	+14.16	+0 3.57	+10.35	-0.52	- 4.00	5 27 39.10	51 18 43.4
5 28 5.6	8.7	29 17.42	29 0.7	59 59.65	+12.80	+0 3.57	+11.16	-0.53	- 3.90	5 29 39.36	51 15 31.2
5 35 15.5	...	36 28.20	36 6.0	50 50.80	+16.96	+0 3.58	+10.16	-0.56	- 3.70	5 36 50.18	51 24 40.9
5 37 13.6	8.4	38 26.05	38 8.0	8 30.55	+13.91	+0 3.57	+10.58	-0.56	- 3.60	5 38 47.95	51 6 57.9
5 38 23.0	8.2	39 35.12	39 21.0	55 46.50	+10.79	+0 3.57	+10.14	-0.57	- 3.50	5 39 57.06	51 19 38.1
5 39 27.0	7.8	40 38.52	40 26.8	46 57.45	+ 8.92	+0 3.58	+10.66	-0.58	- 3.50	5 41 0.50	51 28 25.4
5 43 1.1	9.0	44 12.93	43 54.0	29 13.80	+14.32	+0 3.58	+11.49	-0.60	- 3.40	5 44 34.97	51 46 14.2
5 43 58.0	8.7	45 10.47	44 55.0	9 32.90	+11.92	+0 3.57	+10.86	-0.59	- 3.30	5 45 32.35	51 5 51.8
5 44 43.7	8.7	45 56.50	46 7.3	43 13.65	- 8.23	+0 3.58	+11.01	-0.60	- 3.30	5 46 18.48	51 31 50.8
5 46 44.2	8.8	47 57.97	47 41.0	8 29.35	+13.07	+0 3.57	+10.59	-0.60	- 3.20	5 48 19.85	51 6 55.4
5 48 38.0	8.8	49 49.26	49 33.4	49 55.50	+12.14	+0 3.59	+ 9.98	-0.61	- 3.20	5 50 11.22	51 25 27.0
5 49 31.0	8.3	50 40.88	50 52.7	10 21.00	- 9.08	+0 3.58	+ 9.74	-0.61	- 3.10	5 51 2.75	51 4 39.8
5 51 12.4	9.0	52 26.38	52 8.0	5 44.15	+14.13	+0 3.58	+ 9.88	-0.61	- 3.00	5 52 48.28	51 9 39.5
5 53 1.0	6.5	54 12.50	53 59.2	40 55.40	+10.12	+0 3.59	+10.42	-0.63	- 3.10	5 54 34.49	51 34 24.5
5 54 7.7	8.4	55 21.91	55 6.0	21 4.20	+12.01	+0 3.59	+10.84	-0.64	- 3.00	5 55 43.96	51 54 17.3
5 55 59.2	8.8	57 12.55	56 58.2	17 19.00	+10.79	+0 3.59	+11.24	-0.65	- 2.90	5 57 34.62	51 58 1.1
5 57 52.9	8.7	59 7.05	58 46.0	43 4.10	+16.07	+0 3.59	+10.92	-0.64	- 2.80	5 59 29.02	51 32 20.4
5 59 23.3	9.0	0 36.40	0 20.5	58 56.95	+12.18	+0 3.58	+10.90	-0.65	- 2.70	6 0 58.29	51 16 23.3
6 1 12.4	8.5	2 24.29	2 9.6	32 40.25	+11.16	+0 3.59	+11.06	-0.66	- 2.70	6 2 46.28	51 42 38.5
6 2 20.4	6.0	3 32.13	3 22.0	3 9.35	+ 7.75	+0 3.58	+10.66	-0.66	- 2.60	6 3 53.99	51 12 5.3
6 3 13.1	8.8	4 27.10	4 11.8	49 49.40	+11.68	+0 3.59	+11.33	-0.66	- 2.60	6 4 49.02	51 25 29.5
6 4 6.6	9.2	5 21.40	5 40.2	41 49.95	+14.31	+0 3.59	+10.59	-0.67	- 2.60	6 5 43.34	51 33 1.9
6 9 40.0	8.7	10 53.47	10 34.7	28 51.00	+14.25	+0 3.59	+11.40	-0.69	- 2.40	6 11 15.44	51 46 28.5
6 10 39.8	8.5	11 54.38	11 41.3	24 18.25	+ 9.91	+0 3.59	+11.65	-0.70	- 2.40	6 12 16.35	51 50 56.8
6 18 24.9	8.8	19 38.01	19 20.6	47 54.20	+13.28	+0 3.60	+10.82	-0.71	- 2.10	6 19 59.87	51 27 21.0
6 19 35.9	8.7	20 50.41	20 35.9	29 31.45	+10.99	+0 3.60	+11.60	-0.73	- 2.00	6 21 12.33	51 45 41.9
6 21 12.2	7.8	22 24.85	22 7.4	12 43.30	+13.40	+0 3.59	+10.31	-0.71	- 1.80	6 22 46.60	51 2 30.8
6 22 27.2	8.9	23 39.63	23 25.6	10 30.50	+10.77	+0 3.59	+ 9.79	-0.71	- 1.80	6 24 1.39	51 4 40.0
6 26 42.9	8.6	27 54.45	27 35.6	57 4.25	+14.47	+0 3.59	+10.43	-0.73	- 1.60	6 28 16.22	51 18 9.2
6 31 4.7	8.3	32 17.17	32 0.8	3 12.55	+12.58	+0 3.59	+10.64	-0.74	- 1.50	6 32 38.90	51 11 57.9
6 32 36.7	8.0	33 47.80	33 30.3	40 51.30	+13.32	+0 3.60	+10.38	-0.75	- 1.50	6 34 9.61	51 34 19.1

* A star takes the place of a [] for a defective observation.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	"	s	h m s	° ' "
6 34 46.7	8.3	36 0.01	35 41.1	18 5.30	+14.26	+0 3.60	+11.41	-0.76	- 1.40	6 36 21.89	51 57 6.4
6 36 5.8	8.6	37 19.06	37 5.2	20 26.25	+10.50	+0 3.60	+10.67	-0.77	- 1.40	6 37 40.91	51 54 40.6
6 37 43.8	9.0	38 54.80	38 38.1	42 44.75	+12.72	+0 3.61	+10.85	-0.77	- 1.20	6 39 16.56	51 32 24.1
6 39 20.5	8.7	40 36.22	40 22.5	30 18.55	+10.39	+0 3.61	+10.45	-0.77	- 1.20	6 40 58.02	51 44 47.0
6 41 22.0	9.2	42 35.78	42 15.0	31 10.55	+15.77	+0 3.61	+10.62	-0.78	- 1.10	6 42 57.56	51 43 59.9
6 42 3.0	6.5	43 14.62	43 31.0	34 46.80	-12.45	+0 3.61	+11.58	-0.78	- 1.10	6 43 36.37	51 39 56.2
6 47 48.3	....	48 59.68	48 40.8	16 33.25	+14.57	+0 3.59	+ 9.91	-0.77	- 0.80	6 49 21.24	51 58 33.5
6 49 39.4	....	50 52.20	50 32.7	19 59.95	+14.73	+0 3.60	+10.52	-0.80	- 0.80	6 51 13.94	51 55 6.9
6 51 38.3	8.6	52 51.04	52 37.9	40 31.70	+ 9.97	+0 3.61	+10.33	-0.79	- 1.10	6 53 12.71	51 34 29.2
6 52 38.8	....	53 51.82	54 4.8	0 16.45	-10.20	+0 3.59	+ 9.90	-0.78	- 0.60	6 54 13.40	51 14 24.0
6 55 43.3	8.5	56 54.68	56 37.6	39 54.10	+13.01	+0 3.61	+10.14	-0.80	- 0.90	6 57 16.32	51 35 8.5
6 57 11.7	8.0	58 22.98	58 6.3	41 11.65	+12.71	+0 3.61	+10.48	-0.80	- 0.40	6 58 44.60	51 33 51.0
6 58 58.3	....	0 11.39	59 54.3	37 47.65	+13.00	+0 3.61	+10.98	-0.81	- 0.30	7 0 32.99	51 37 15.3
7 0 46.4	8.9	1 58.38	1 37.1	39 34.05	+16.20	+0 3.61	+11.39	-0.81	- 0.30	7 2 19.97	51 35 31.8
7 2 5.4	6.0	3 16.79	3 2.5	36 59.45	+10.87	+0 3.61	+10.80	-0.82	- 0.20	7 3 38.36	51 38 0.2
ZONE 25, FEBRUARY 7, 1871.											
3 29 46.4	9.2	30 40.52	30 21.3	28 21.15	+14.51	+0 16.54	+11.65	+0.64	- 8.00	3 31 15.42	51 55 30.6
3 30 48.3	8.8	31 41.50	31 27.5	17 57.55	+10.77	+0 16.52	+10.70	+0.63	- 7.80	3 32 16.23	51 5 49.4
3 31 48.8	8.4	32 42.69	32 34.0	29 57.80	+ 6.57	+0 16.54	+12.14	+0.70	- 8.00	3 33 17.69	51 53 45.9
3 35 5.8	9.0	36 0.90	35 41.8	23 41.30	+14.46	+0 16.55	+11.88	+0.62	- 8.10	3 36 35.91	52 0 8.9
3 36 24.2	7.5	37 17.45	37 6.4	4 45.65	+ 8.50	+0 16.54	+11.47	+0.58	- 7.80	3 37 52.29	51 18 58.2
3 37 27.9	9.2	38 21.50	38 3.6	18 5.40	+13.77	+0 16.53	+10.70	+0.57	- 8.00	3 38 56.30	51 5 42.5
3 39 35.4	9.8	40 30.22	40 5.4	22 43.80	+18.70	+0 16.55	+11.53	+0.56	- 8.10	3 41 5.25	52 1 9.0
3 41 59.2	9.0	42 52.70	42 32.0	17 40.00	+15.92	+0 16.54	+10.56	+0.54	- 7.80	3 43 27.55	51 6 8.7
3 43 26.7	8.1	44 21.36	44 4.8	13 15.95	+12.75	+0 16.54	+10.84	+0.53	- 7.80	3 44 56.24	51 10 29.5
3 44 44.2	8.9	45 38.05	45 20.0	30 22.05	+13.61	+0 16.56	+10.82	+0.53	- 8.10	3 46 13.11	51 53 23.5
3 46 29.1	9.2	47 24.99	46 59.0	35 29.15	+19.70	+0 16.56	+10.67	+0.51	- 8.00	3 48 0.04	51 48 21.9
3 48 0.3	7.0	48 54.23	48 36.2	15 34.15	+13.84	+0 16.54	+10.04	+0.50	- 7.80	3 49 29.14	51 8 10.2
3 50 4.7	8.5	51 0.37	50 41.8	35 14.55	+14.08	+0 16.57	+10.67	+0.49	- 8.10	3 51 35.48	51 48 29.8
3 51 14.9	9.0	52 8.99	51 50.0	5 4.95	+14.55	+0 16.56	+10.09	+0.47	- 7.90	3 52 43.98	51 18 39.1
3 52 34.8	9.2	53 30.14	53 10.8	53 27.30	+14.72	+0 16.56	+11.23	+0.46	- 8.00	3 54 5.18	51 30 17.6
3 54 10.4	9.5	55 5.91	54 40.0	45 15.45	+19.69	+0 16.56	+10.42	+0.45	- 8.00	3 55 40.99	51 38 33.1
3 55 51.0	8.9	56 46.96	56 27.0	38 3.50	+15.16	+0 16.56	+11.42	+0.43	- 8.00	3 57 22.07	51 45 41.0
4 1 37.4	9.4	2 33.34	2 11.0	28 35.00	+16.85	+0 16.58	+11.71	+0.39	- 8.10	4 3 8.55	51 55 9.6
4 2 42.3	9.5	3 39.32	3 23.2	27 57.85	+12.16	+0 16.58	+11.58	+0.39	- 8.10	4 4 14.55	51 55 41.6
4 5 33.5	8.8	6 28.89	6 10.3	19 57.55	+14.32	+0 16.57	+11.16	+0.37	- 7.80	4 7 3.95	51 3 43.1
4 6 42.7	8.9	7 38.93	7 19.6	26 41.00	+14.57	+0 16.59	+11.23	+0.36	- 8.10	4 8 14.20	51 56 59.3
4 8 42.7	8.9	9 39.49	9 19.6	36 0.25	+15.07	+0 16.59	+10.86	+0.34	- 8.10	4 10 14.74	51 47 39.6
4 11 21.0	9.2	12 16.34	12 26.9	52 39.50	- 8.08	+0 16.58	+11.11	+0.32	- 7.90	4 12 51.53	51 30 36.8
4 11 21.0	9.4	12 17.34	12 1.3	52 39.50	+12.20	+0 16.58	+11.08	+0.32	- 7.90	4 12 52.53	51 30 57.1
4 13 7.2	6.5	14 2.71	13 43.8	45 7.40	+14.36	+0 16.58	+10.55	+0.31	- 8.00	4 14 37.94	51 38 30.1
4 14 50.9	9.0	15 48.56	15 23.0	1 28.20	+19.58	+0 16.58	+10.46	+0.29	- 7.90	4 16 23.73	51 22 14.0
4 15 52.0	6.6	16 47.59	16 32.6	40 40.80	+11.38	+0 16.59	+10.74	+0.29	- 8.00	4 17 22.86	51 42 53.1
4 17 9.8	8.8	18 7.01	17 50.3	36 56.65	+12.65	+0 16.60	+11.11	+0.28	- 8.00	4 18 42.31	51 46 38.5
ZONE 26, FEBRUARY 7, 1871.											
4 39 5.7	8.0	40 3.55	39 40.5	27 38.95	+17.45	+0 16.53	+11.44	+0.11	- 7.80	4 40 38.90	51 55 54.9
4 43 24.7	8.8	44 22.15	44 3.4	9 32.85	+14.42	+0 16.51	+11.23	+0.08	- 7.60	4 44 57.33	51 13 56.5
4 46 34.2	9.0	47 30.54	47 12.4	28 29.50	+13.67	+0 16.53	+11.72	+0.06	- 7.70	4 48 5.91	51 54 58.4

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
4 47 42.5	8.3	48 40.52	48 21.6	38 44.75	+14.33	+0 16.52	+11.58	+0.05	- 7.70	4 49 15.83	51 44 43.4
4 49 32.6	8.8	50 29.33	50 4.7	5 8.70	+18.83	+0 16.52	+10.03	+0.03	- 7.50	4 51 4.54	51 18 22.0
5 11 14.2	8.0	12 13.51	11 56.3	17 28.00	+13.23	+0 16.53	+10.54	-0.05	- 7.10	5 12 48.77	51 5 50.6
5 17 27.5	8.2	18 26.78	18 9.4	44 18.45	+13.22	+0 16.54	+11.65	-0.17	- 7.10	5 19 2.09	51 38 59.1
5 19 21.8	9.2	20 20.79	20 2.3	11 0.95	+14.19	+0 16.54	+10.26	-0.18	- 7.00	5 20 55.99	51 12 15.6
5 20 33.5	9.0	21 32.59	21 18.4	5 27.25	+10.88	+0 16.55	+10.24	-0.19	- 7.00	5 22 7.82	51 17 45.6
5 21 32.8	9.2	22 34.86	22 25.0	7 24.35	+ 7.59	+0 16.55	+10.75	-0.20	- 6.90	5 23 10.08	51 15 45.5
5 22 36.7	9.5	23 36.37	23 24.0	5 27.15	+ 9.50	+0 16.55	+10.25	-0.20	- 6.90	5 24 11.60	51 17 43.7
5 23 22.6	8.5	24 23.76	24 19.6	11 6.10	+ 3.22	+0 16.54	+10.35	-0.21	- 6.90	5 24 58.95	51 11 58.3
5 26 4.6	8.8	27 3.81	26 47.0	4 32.20	+12.86	+0 16.56	+11.34	-0.23	- 6.90	5 27 39.04	51 18 41.9
5 28 5.6	8.5	29 4.08	28 46.5	7 43.00	+13.49	+0 16.56	+10.78	-0.24	- 6.80	5 29 39.30	51 15 30.6
5 37 13.6	8.0	38 12.77	37 49.3	16 15.90	+18.06	+0 16.56	+10.17	-0.30	- 6.60	5 38 47.92	51 6 58.7
5 38 23.0	8.3	39 21.84	39 8.2	3 29.10	+10.41	+0 16.57	+11.11	-0.31	- 6.60	5 39 57.04	51 19 38.4
5 39 27.0	7.3	40 25.12	40 8.0	54 45.20	+13.04	+0 16.57	+11.63	-0.32	- 6.60	5 41 0.35	51 28 25.0
5 43 1.1	9.2	43 59.59	43 35.9	36 58.40	+17.96	+0 16.58	+11.10	-0.34	- 6.60	5 44 34.89	51 46 15.0
5 43 58.0	7.5	44 57.33	44 43.0	17 14.10	+11.00	+0 16.56	+10.51	-0.34	- 6.40	5 45 32.45	51 5 51.6
5 45 20.9	8.2	46 20.58	46 3.0	51 51.35	+13.41	+0 16.57	+10.82	-0.35	- 6.50	5 46 55.81	51 31 16.5
5 46 44.2	8.5	47 44.81	47 28.7	16 12.65	+12.38	+0 16.56	+10.23	-0.36	- 6.40	5 48 19.92	51 6 53.2
5 48 38.0	8.3	49 36.06	49 17.9	57 41.10	+13.90	+0 16.57	+10.97	-0.37	- 6.50	5 50 11.24	51 25 26.2
5 49 31.0	8.0	50 27.76	50 49.4	17 56.95	-16.61	+0 16.56	+10.59	-0.38	- 6.30	5 51 2.84	51 4 39.4
5 51 12.4	9.5	52 13.20	51 48.2	13 32.10	+19.20	+0 16.57	+10.81	-0.39	- 6.30	5 52 48.31	51 9 39.7
5 53 1.0	7.0	53 59.16	53 42.9	48 39.40	+12.41	+0 16.58	+11.43	-0.41	- 6.30	5 54 34.36	51 34 26.0
5 54 7.7	8.8	55 8.81	54 51.0	28 49.20	+13.45	+0 16.59	+11.80	-0.42	- 6.40	5 55 44.08	51 54 16.7
5 55 59.2	8.5	56 59.35	56 39.0	25 7.00	+15.39	+0 16.59	+10.81	-0.43	- 6.40	5 57 34.64	51 57 59.2
5 57 52.9	8.0	58 53.81	58 35.9	50 42.40	+13.63	+0 16.58	+10.53	-0.43	- 6.20	5 59 28.98	51 32 21.3
5 59 23.3	9.5	0 23.22	0 4.6	6 40.55	+14.25	+0 16.58	+10.51	-0.44	- 6.10	6 0 58.32	51 16 23.3
6 1 12.4	8.5	2 11.09	1 54.1	40 23.10	+12.90	+0 16.59	+10.64	-0.46	- 6.10	6 2 46.28	51 42 38.9
6 2 20.4	6.8	3 18.79	3 2.9	10 55.35	+12.20	+0 16.58	+10.23	-0.45	- 6.00	6 3 53.86	51 12 5.3
6 3 13.1	8.0	4 13.90	4 1.0	57 30.85	+ 9.85	+0 16.59	+10.94	-0.47	- 6.00	6 4 49.01	51 25 27.8
6 4 6.6	9.6	5 8.16	6 12.0	48 58.40	-48.58	+0 16.59	+10.62	-0.47	- 6.00	6 5 43.30	51 33 1.2
6 9 40.0	9.2	10 40.33	10 26.7	36 27.45	+10.31	+0 16.60	+11.07	-0.51	- 5.90	6 11 15.49	51 46 29.6
6 10 39.8	8.8	11 41.14	11 29.2	31 58.55	+ 9.00	+0 16.60	+11.27	-0.52	- 5.90	6 12 16.30	51 50 57.1
6 18 24.9	8.3	19 24.75	19 5.8	55 37.85	+14.50	+0 16.60	+10.40	-0.56	- 5.60	6 19 59.76	51 27 20.0
6 19 35.9	8.8	20 37.21	20 26.0	37 12.65	+ 8.47	+0 16.60	+11.26	-0.57	- 5.60	6 21 12.29	51 45 39.6
6 21 12.2	8.2	22 11.69	21 58.9	20 20.65	+ 9.86	+0 16.59	+ 9.89	-0.56	- 5.40	6 22 46.59	51 2 31.3
6 22 27.2	8.6	23 26.37	23 7.7	18 16.80	+14.38	+0 16.59	+10.73	-0.57	- 5.30	6 24 1.27	51 4 40.2
6 26 42.9	8.0	27 41.31	27 4.2	4 45.85	+13.09	+0 16.61	+11.40	-0.60	- 5.30	6 28 16.23	51 18 9.0
6 31 4.7	8.6	32 4.13	31 42.0	10 56.10	+16.96	+0 16.60	+10.17	-0.63	- 5.10	6 32 38.98	51 12 0.1
6 32 36.7	7.6	33 34.68	33 16.3	48 34.30	+14.00	+0 16.61	+11.39	-0.64	- 5.10	6 34 9.61	51 34 19.6
6 34 46.7	8.0	35 46.87	35 27.5	25 46.05	+14.64	+0 16.63	+11.00	-0.65	- 5.10	6 36 21.89	51 57 7.4
6 36 5.8	8.3	37 6.02	36 54.2	28 6.50	+ 8.91	+0 16.63	+11.66	-0.67	- 5.10	6 37 41.00	51 54 41.4
6 37 43.8	8.8	38 41.74	38 27.6	50 23.30	+10.74	+0 16.62	+10.48	-0.67	- 5.00	6 39 16.61	51 32 24.8
6 39 20.5	9.0	40 23.04	40 3.2	38 4.75	+15.01	+0 16.62	+11.40	-0.68	- 4.90	6 40 57.94	51 44 48.1
6 41 22.0	9.3	42 22.64	42 0.6	38 54.25	+16.68	+0 16.62	+11.60	-0.69	- 4.80	6 42 57.52	51 43 59.8
6 42 3.0	6.5	43 1.56	43 37.7	42 13.60	-27.42	+0 16.62	+10.86	-0.70	- 4.80	6 43 36.40	51 39 55.4
6 51 38.3	8.0	52 37.96	50 20.2	48 16.00	+13.54	+0 16.63	+11.30	-0.74	- 4.50	6 53 12.70	51 34 31.4
6 55 43.3	9.0	56 41.72	56 24.2	47 36.65	+13.31	+0 16.63	+11.13	-0.76	- 4.30	6 57 16.42	51 35 9.2
6 57 11.7	8.2	58 9.82	58 0.6	48 50.20	+ 7.00	+0 16.64	+11.50	-0.77	- 4.30	6 58 44.50	51 33 49.2
7 0 46.4	8.4	1 45.32	1 25.4	47 15.40	+15.14	+0 16.64	+11.03	-0.79	- 4.10	7 2 19.96	51 35 30.6
7 2 5.4	6.5	3 3.77	2 47.6	44 43.40	+12.31	+0 16.64	+11.78	-0.79	- 4.10	7 3 38.40	51 38 0.1
7 4 13.5	7.8	5 12.44	4 58.5	43 0.90	+10.56	+0 16.64	+11.35	-0.80	- 4.00	7 5 47.05	51 39 39.9
7 5 44.6	9.0	6 43.32	6 30.9	4 57.20	+ 9.49	+0 16.63	+10.11	-0.80	- 3.90	7 7 17.83	51 17 40.8

ZONE 27, FEBRUARY 11, 1871.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
4 39 44.4	9.0	40 39.37	40 20.8	22 26.95	+14.02	+0 19.72	+11.67	+0.20	- 8.10	4 41 18.02	52 1 2.6
4 43 53.6	8.0	44 46.99	44 29.6	59 37.40	+13.30	+0 19.70	+11.61	+0.17	- 7.90	4 45 25.49	51 23 50.2
4 44 54.3	8.6	45 49.39	45 34.8	29 46.55	+11.03	+0 19.72	+12.25	+0.16	- 8.00	4 46 28.03	51 53 38.9
4 44 54.3	9.2	45 49.71	45 36.0	29 46.55	+10.35	+0 19.72	+12.26	+0.16	- 8.00	4 46 28.35	51 53 38.3
4 46 34.2	9.0	47 27.08	47 10.3	28 26.80	+12.69	+0 19.73	+11.86	+0.15	- 8.00	4 48 5.74	51 54 59.4
4 49 32.6	8.7	50 25.97	50 7.0	5 2.65	+14.55	+0 19.71	+10.21	+0.13	- 8.00	4 51 4.47	51 18 22.8
4 50 57.4	...	51 51.76	51 35.7	54 22.55	+12.28	+0 19.72	+11.68	+0.12	- 7.90	4 52 30.32	51 29 1.7
4 51 58.8	9.8	52 54.20	52 12.4	...	...	+0 19.73	...	+0.11	...	4 53 32.77	...
4 54 23.5	8.4	55 18.57	54 58.0	19 51.90	+15.86	+0 19.72	+11.28	+0.10	- 7.70	4 55 57.04	51 3 34.6
4 55 20.3	5.5	56 14.98	56 5.2	57 31.35	+ 7.48	+0 19.73	+11.11	+0.09	- 7.80	4 56 53.54	51 25 46.2
4 56 26.9	8.8	57 23.37	57 2.0	26 36.80	+16.16	+0 19.74	+11.35	+0.08	- 7.90	4 58 2.06	51 56 49.1
5 0 15.9	8.9	1 13.97	0 52.3	28 50.65	+16.40	+0 19.75	+11.92	+0.04	- 7.90	5 1 52.65	51 54 34.8
5 2 13.0	8.7	3 8.52	2 50.7	52 56.05	+13.57	+0 19.75	+11.25	+0.03	- 7.70	5 3 47.11	51 30 25.5
5 3 36.2	8.6	4 30.50	4 14.5	12 32.95	+12.28	+0 19.74	+10.79	+0.02	- 7.60	5 5 9.00	51 10 46.4
5 4 38.5	8.5	5 33.46	5 12.5	34 47.45	+15.90	+0 19.76	+12.09	+0.01	- 7.80	5 6 12.13	51 48 36.3
5 7 11.5	8.1	8 7.39	7 49.0	26 29.60	+13.89	+0 19.76	+11.35	-0.01	- 7.80	5 8 46.09	51 56 50.5
5 9 45.5	9.8	10 41.13	10 14.5	6 25.85	+20.38	+0 19.74	+10.48	-0.02	- 7.60	5 11 19.66	51 16 59.2
5 12 16.2	9.8	13 21.68	12 57.2	21 55.35	+18.87	+0 19.74	+10.36	-0.04	- 7.50	5 14 0.14	51 1 27.3
5 13 16.0	9.3	14 13.52	14 31.8	51 30.10	-13.94	+0 19.76	+10.88	-0.05	- 7.60	5 14 52.11	51 31 19.9
5 13 59.9	9.0	14 55.04	15 20.2	52 28.80	-19.21	+0 19.76	+11.06	-0.05	- 7.60	5 15 33.63	51 30 15.8
5 19 45.8	8.0	20 40.60	20 17.9	12 23.55	+17.43	+0 19.75	+10.69	-0.10	- 7.40	5 21 19.09	51 10 55.6
5 26 34.9	9.0	27 31.04	27 6.5	6 50.55	+18.77	+0 19.76	+10.63	-0.14	- 7.30	5 28 9.55	51 16 27.6
5 28 5.6	8.8	29 0.66	28 40.7	7 43.60	+15.32	+0 19.77	+10.90	-0.15	- 7.20	5 29 39.18	51 15 30.9
5 38 25.9	9.0	39 22.19	38 58.5	11 15.80	+18.19	+0 19.78	+10.40	-0.23	- 7.00	5 40 0.65	51 11 57.7
5 44 34.2	9.2	45 31.47	45 3.2	32 5.65	+21.41	+0 19.81	+11.31	-0.28	- 7.10	5 46 10.08	51 51 9.7
5 45 24.0	9.2	46 19.14	46 46.9	37 51.15	-21.07	+0 19.81	+11.36	-0.28	- 7.00	5 46 57.74	51 44 41.6
5 48 46.5	8.8	49 40.37	49 23.7	19 1.00	+12.85	+0 19.79	+11.07	-0.30	- 6.80	5 50 18.76	51 4 4.4
5 51 42.1	9.0	52 36.82	52 13.8	7 52.25	+17.63	+0 19.80	+10.92	-0.32	- 6.80	5 53 15.25	51 15 16.8
5 54 27.6	9.0	55 23.47	55 2.8	56 11.65	+15.80	+0 19.81	+10.67	-0.34	- 6.80	5 56 1.94	51 26 54.3
5 59 23.3	9.0	0 19.86	59 53.4	6 44.95	+20.30	+0 19.81	+10.57	-0.37	- 6.60	6 0 58.26	51 16 23.9
6 1 18.2	9.3	2 14.37	1 47.0	35 57.00	+20.76	+0 19.83	+10.94	-0.39	- 6.70	6 2 52.89	51 47 11.9
6 2 58.3	9.0	3 52.50	3 28.0	11 21.80	+18.80	+0 19.82	+10.43	-0.39	- 6.50	6 4 30.87	51 11 44.2
6 4 6.6	9.2	5 4.82	4 47.9	49 58.75	+12.87	+0 19.83	+10.47	-0.40	- 6.50	6 5 43.27	51 33 1.0

ZONE 28, FEBRUARY 20, 1871.

4 39 44.4	8.8	40 34.17	40 15.7	22 26.15	+13.95	+0 24.73	+11.16	+0.44	- 8.50	4 41 18.07	52 1 2.1
4 41 10.0	8.8	41 55.46	42 17.9	12 14.00	-17.19	+0 24.71	+10.20	+0.43	- 8.20	4 42 39.15	51 10 42.0
4 41 10.0	9.1	41 55.96	41 31.9	12 14.00	+18.50	+0 24.71	+10.19	+0.43	- 8.20	4 42 39.65	51 11 17.6
4 43 53.6	7.8	44 41.73	44 24.4	59 35.05	+13.22	+0 24.72	+11.08	+0.41	- 8.30	4 45 25.49	51 23 51.2
4 44 54.3	8.9	45 44.41	45 28.0	29 46.65	+12.40	+0 24.74	+11.68	+0.40	- 8.40	4 46 28.31	51 53 38.9
4 44 54.3	9.4	45 44.83	45 30.7	29 46.65	+10.66	+0 24.74	+11.70	+0.40	- 8.40	4 46 28.73	51 53 37.2
4 46 34.2	9.0	47 21.90	47 7.1	28 24.20	+11.18	+0 24.74	+11.34	+0.39	- 8.40	4 48 5.81	51 54 59.2
5 0 15.9	9.2	1 8.71	0 48.2	28 47.95	+15.49	+0 24.75	+11.40	+0.28	- 8.40	5 1 52.63	51 54 35.3
5 2 13.0	9.0	3 3.38	2 42.4	52 57.00	+16.01	+0 24.74	+10.75	+0.26	- 8.30	5 3 47.19	52 30 25.5
5 3 36.2	8.8	4 25.32	4 9.9	12 31.35	+11.82	+0 24.74	+10.33	+0.25	- 8.20	5 5 9.05	51 10 46.2
5 4 38.5	8.3	5 28.24	5 12.7	34 41.90	+11.74	+0 24.75	+11.57	+0.24	- 8.40	5 6 12.13	51 48 36.2
5 7 11.5	8.2	8 2.17	7 41.7	26 28.90	+15.48	+0 24.76	+10.83	+0.24	- 8.40	5 8 46.12	51 56 51.4
5 9 45.5	9.1	10 36.03	10 23.0	6 13.85	+ 9.96	+0 24.75	+10.11	+0.20	- 8.20	5 11 19.79	51 16 59.5
5 12 16.2	9.8	13 16.44	12 55.8	21 51.50	+15.87	+0 24.75	+ 9.90	+0.18	- 8.10	5 14 0.13	51 1 26.8
5 13 16.0	9.0	14 8.38	14 1.9	51 47.25	+ 4.95	+0 24.76	+10.57	+0.17	- 8.20	5 14 52.19	51 31 20.4

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	° "	"	m s	"	s	"	h m s	° ' "
5 13 59.9	9.0	14 49.90	14 41.3	52 54.20	+ 6.56	+0 24.75	+10.82	+0.17	- 8.20	5 15 33.70	51 30 15.0
5 19 45.8	7.5	20 35.38	20 15.3	12 20.25	+15.43	+0 24.76	+10.23	+0.12	- 8.10	5 21 19.10	51 10 55.4
5 21 47.1	9.3	22 40.48	22 20.6	53 16.25	+15.17	+0 24.76	+10.79	+0.10	- 8.20	5 23 24.26	51 29 58.9
5 26 34.9	9.4	27 25.96	26 59.4	6 48.95	+20.38	+0 24.76	+10.13	+0.07	- 8.10	5 28 9.68	51 16 29.2
5 28 5.6	8.7	28 55.56	28 36.0	7 40.95	+15.02	+0 24.77	+10.41	+0.06	- 8.10	5 29 39.29	51 15 31.6
5 38 25.9	9.0	39 17.05	38 56.7	11 10.85	+15.66	+0 24.77	+ 9.96	-0.02	- 8.00	5 40 0.71	51 11 58.4
5 43 1.1	9.8	43 51.15	.....	.....	.....	+0 24.79	.....	-0.07	.....	5 44 34.93	.....
5 44 34.2	8.8	45 26.23	45 6.8	31 57.45	+14.67	+0 24.79	+10.87	-0.07	- 8.00	5 46 10.03	51 51 9.5
5 45 24.0	8.7	46 13.98	46 5.0	38 16.65	+ 6.82	+0 24.79	+11.18	-0.08	- 8.00	5 46 57.76	51 44 42.5
5 48 46.5	7.8	49 35.23	49 21.2	18 57.80	+10.77	+0 24.78	+10.59	-0.10	- 7.80	5 50 18.81	51 4 3.7
5 51 42.1	8.9	52 31.58	52 11.0	7 48.85	+15.79	+0 24.79	+10.43	-0.12	- 7.80	5 53 15.20	51 15 16.5
5 54 27.6	8.7	55 18.31	54 52.1	56 11.95	+19.99	+0 24.79	+10.14	-0.15	- 7.80	5 56 1.95	51 26 56.4
5 59 23.3	9.5	0 14.70	59 51.1	6 41.35	+18.08	+0 24.79	+10.16	-0.18	- 7.60	6 0 58.27	51 16 23.6
6 1 18.2	9.2	2 9.25	1 48.5	35 50.60	+15.76	+0 24.80	+10.52	-0.20	- 7.80	6 2 52.93	51 47 11.5
6 2 58.3	8.7	3 47.38	3 31.3	11 15.05	+12.36	+0 24.80	+10.16	-0.21	- 7.60	6 4 30.91	51 11 42.8
6 4 6.6	9.2	4 59.74	4 43.3	49 55.40	+12.49	+0 24.81	+11.36	-0.23	- 7.70	6 5 43.34	51 33 3.4
ZONE 29, FEBRUARY 21, 1871.											
5 26 34.9	9.1	27 27.18	26 59.2	6 49.55	+21.45	+0 23.45	+10.49	+0.09	- 8.20	5 28 9.61	51 16 30.0
5 28 5.6	8.7	28 56.98	28 32.7	7 43.10	+18.62	+0 23.45	+10.73	+0.08	- 8.20	5 29 39.41	51 15 33.4
5 38 25.9	8.7	39 18.37	38 57.8	11 11.65	+15.81	+0 23.46	+10.34	+0.00	- 8.10	5 40 0.74	51 11 58.1
5 44 34.2	8.9	45 27.57	45 10.0	31 55.65	+13.31	+0 23.46	+11.28	-0.04	- 8.10	5 46 10.07	51 51 10.4
5 45 24.0	8.5	46 15.18	46 28.0	38 0.05	- 9.70	+0 23.46	+11.47	-0.05	- 8.10	5 46 57.66	51 44 42.9
5 48 46.5	7.2	49 36.49	49 17.9	19 0.70	+14.31	+0 23.47	+10.94	-0.08	- 7.90	5 50 18.78	51 4 4.7
5 51 42.1	8.5	52 32.82	52 7.6	7 52.05	+19.31	+0 23.47	+10.78	-0.10	- 7.90	5 53 15.14	51 15 17.2
5 54 27.6	8.4	55 19.59	54 55.4	56 10.35	+18.47	+0 23.46	+10.56	-0.12	- 7.90	5 56 1.93	51 26 56.9
5 56 6.9	9.5	56 59.60	56 39.2	1 39.00	+15.60	+0 23.46	+10.63	-0.14	- 7.90	5 57 41.90	51 21 24.8
5 59 23.3	9.0	0 16.04	59 50.0	6 44.70	+19.92	+0 23.48	+10.49	-0.16	- 7.70	6 0 58.32	51 16 22.4
6 1 18.2	9.0	2 10.55	1 42.7	35 57.65	+21.06	+0 23.47	+10.86	-0.18	- 7.90	6 2 52.92	51 47 10.1
6 2 58.3	8.8	3 48.62	3 28.1	11 18.40	+15.73	+0 23.48	+10.38	-0.18	- 7.70	6 4 30.86	51 11 43.1
6 4 6.6	9.2	5 0.92	4 38.7	49 59.90	+16.90	+0 23.48	+10.39	-0.20	- 7.70	6 5 43.22	51 33 2.4
ZONE 30, FEBRUARY 21, 1871.											
6 47 24.7	8.0	48 16.72	47 52.4	52 11.30	+18.82	+0 23.36	+10.89	-0.50	- 6.70	6 48 58.94	51 30 38.6
6 49 39.4	8.7	50 32.18	50 9.3	27 41.25	+17.30	+0 23.34	+11.52	-0.53	- 6.80	6 51 13.93	51 55 6.9
6 50 39.5	8.5	51 32.54	51 18.0	32 47.20	+10.97	+0 23.35	+11.54	-0.53	- 6.70	6 52 14.28	51 49 54.3
6 51 38.3	8.3	52 30.92	52 17.0	48 11.45	+10.58	+0 23.36	+11.34	-0.53	- 6.70	6 53 12.60	51 34 29.2
6 52 33.6	8.8	53 27.66	53 19.2	38 44.95	+ 6.45	+0 23.35	+11.68	-0.54	- 6.70	6 54 9.35	51 43 51.6
6 53 53.8	9.4	54 45.89	54 32.6	14 40.85	+10.22	+0 23.36	+11.25	-0.54	- 6.50	6 55 27.41	51 7 58.8
6 58 58.3	8.8	59 51.33	59 31.0	45 28.30	+15.43	+0 23.37	+10.64	-0.58	- 6.40	7 0 32.92	51 37 14.3
7 2 45.5	8.0	3 36.40	3 16.4	48 1.10	+15.22	+0 23.37	+11.24	-0.61	- 6.30	7 4 17.93	51 34 40.7
7 17 14.0	8.5	18 5.53	7 43.2	17 43.50	+17.15	+0 23.38	+10.58	-0.69	- 5.80	7 18 46.74	51 4 55.2
7 18 33.1	9.0	19 24.71	19 8.6	17 21.00	+12.38	+0 23.38	+10.57	-0.69	- 5.70	7 20 5.91	51 5 12.7
7 20 12.3	8.0	21 3.89	20 41.4	35 37.40	+17.04	+0 23.37	+10.83	-0.72	- 5.80	7 21 45.19	51 47 0.5
7 22 42.5	7.0	23 32.34	23 21.2	47 46.80	+ 8.45	+0 23.38	+11.31	-0.73	- 5.70	7 24 13.57	51 34 42.3
7 23 27.0	8.0	24 19.55	24 34.0	33 18.55	-10.90	+0 23.37	+11.66	-0.74	- 5.70	7 25 0.80	51 48 51.3
7 27 41.9	9.0	28 33.01	28 8.8	54 55.30	+18.46	+0 23.37	+11.58	-0.76	- 5.50	7 29 14.12	51 27 42.6
7 29 8.9	9.2	30 0.27	29 44.8	55 41.40	+11.83	+0 23.37	+10.55	-0.77	- 5.40	7 30 41.35	51 26 48.5
7 30 10.9	8.5	31 1.66	30 48.3	38 0.90	+10.16	+0 23.37	+11.47	-0.78	- 5.40	7 31 42.79	51 44 27.9
7 31 23.9	8.7	32 16.06	31 58.7	48 38.90	+13.24	+0 23.38	+11.42	-0.78	- 5.40	7 32 57.14	51 33 52.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
7 32 46.6	9.0	33 37.34	33 16.2	22 0.65	+16.25	+0 23.39	+10.33	-0.78	- 5.20	7 34 18.29	51 0 32.5
7 34 3.1	8.3	34 54.20	34 37.1	13 49.70	+13.13	+0 23.39	+11.00	-0.79	- 5.20	7 35 35.16	51 8 40.6
7 35 11.8	7.3	36 1.20	35 43.5	3 4.75	+13.54	+0 23.39	+11.00	-0.78	- 5.20	7 36 42.19	51 19 25.6
7 36 30.6	9.0	37 21.47	37 6.4	15 59.60	+11.61	+0 23.39	+10.23	-0.80	- 5.10	7 38 2.38	51 6 27.7
7 38 27.5	8.5	39 18.47	38 56.1	9 47.30	+17.18	+0 23.39	+11.29	-0.82	- 5.10	7 39 59.36	51 12 46.0
7 39 28.8	8.0	40 19.02	40 5.0	41 34.50	+10.63	+0 23.38	+11.06	-0.83	- 5.10	7 40 59.98	51 40 51.7
7 41 2.2	8.6	41 52.59	41 33.7	25 42.80	+14.26	+0 23.37	+11.07	-0.84	- 5.10	7 42 33.57	51 56 46.6
7 42 11.3	9.3	43 1.76	42 42.0	6 35.00	+15.17	+0 23.38	+10.54	-0.83	- 4.90	7 43 42.59	51 15 54.6
7 43 28.4	9.3	44 19.49	44 7.0	18 35.15	+ 9.62	+0 23.39	+10.90	-0.83	- 4.80	7 45 0.28	51 3 48.9
7 45 21.3	9.0	46 11.80	45 54.3	53 16.90	+13.34	+0 23.38	+11.25	-0.85	- 4.80	7 46 52.62	51 29 10.7
7 47 11.4	8.8	48 1.28	47 46.0	41 31.60	+11.62	+0 23.38	+11.02	-0.87	- 4.80	7 48 42.10	51 40 53.4
7 53 46.4	8.3	54 37.47	54 15.6	5 26.85	+16.77	+0 23.39	+10.22	-0.89	- 4.50	7 55 18.10	51 17 0.8
7 56 35.5	9.2	57 24.24	57 10.5	7 38.50	+10.50	+0 23.40	+10.83	-0.91	- 4.30	7 58 4.82	51 14 42.9
7 57 33.5	6.5	58 22.13	58 7.3	30 29.45	+11.19	+0 23.38	+10.97	-0.93	- 4.40	7 59 2.78	51 51 52.4
7 58 25.9	8.0	59 15.32	59 9.2	4 24.95	+ 4.67	+0 23.39	+11.39	-0.92	- 4.30	7 59 55.86	51 17 50.6
8 3 20.2	9.4	4 8.99	3 52.3	9 28.50	+12.81	+0 23.40	+11.26	-0.94	- 4.10	8 4 49.43	51 12 53.8
8 5 6.7	8.7	5 55.55	5 38.1	12 34.25	+13.36	+0 23.40	+10.71	-0.95	- 4.00	8 6 35.95	51 9 47.6
8 7 34.7	9.0	8 23.85	7 57.0	31 14.55	+20.26	+0 23.38	+11.00	-0.98	- 4.00	8 9 4.29	51 51 13.7
8 8 42.2	9.2	9 31.64	9 20.7	38 3.40	+ 8.26	+0 23.39	+11.52	-0.98	- 3.90	8 10 12.05	51 44 13.2
8 9 34.2	8.4	10 23.71	10 13.1	39 42.25	+ 8.04	+0 23.39	+11.92	-0.99	- 3.90	8 11 4.10	51 42 34.3
8 10 33.2	9.5	11 24.30	11 12.7	41 58.35	+ 8.81	+0 23.39	+11.16	-0.99	- 3.90	8 12 4.66	51 40 17.9
ZONE 31, FEBRUARY 28, 1871.											
6 47 24.7	8.2	48 12.26	47 47.7	52 9.80	+18.74	+0 28.35	+10.58	-0.35	- 7.70	6 48 59.12	51 30 39.2
6 49 39.4	8.8	50 27.08	50 5.4	27 37.15	+16.39	+0 28.35	+11.16	-0.38	- 7.80	6 51 13.99	51 55 9.2
6 50 39.5	8.8	51 27.42	51 8.4	32 47.85	+14.38	+0 28.35	+11.14	-0.38	- 7.70	6 52 14.31	51 49 56.2
6 51 38.3	8.3	52 25.92	52 12.0	48 8.95	+10.58	+0 28.35	+10.99	-0.39	- 7.60	6 53 12.73	51 34 31.0
6 52 33.6	8.8	53 22.64	53 12.5	38 42.25	+ 7.66	+0 28.35	+11.32	-0.40	- 7.60	6 54 9.47	51 43 54.8
6 53 53.8	9.4	54 40.85	54 23.6	14 42.75	+12.22	+0 28.35	+10.89	-0.40	- 7.40	6 55 27.53	51 7 58.1
6 58 58.3	9.5	59 46.33	59 20.8	45 28.00	+19.39	+0 28.35	+10.25	-0.44	- 7.40	7 0 33.04	51 37 17.7
7 2 45.5	8.5	3 31.42	3 10.8	48 0.35	+15.67	+0 28.35	+10.90	-0.47	- 7.40	7 4 18.07	51 34 41.0
7 22 42.5	7.0	23 27.44	23 5.9	47 52.80	+16.36	+0 28.34	+10.88	-0.61	- 6.80	7 24 13.75	51 34 43.2
7 34 3.1	8.0	34 49.16	34 29.1	13 50.65	+15.44	+0 28.33	+10.64	-0.67	- 6.30	7 35 35.18	51 8 41.0
7 35 11.8	7.0	35 56.26	35 41.1	3 2.35	+11.63	+0 28.33	+10.68	-0.66	- 6.30	7 36 42.31	51 19 25.2
7 36 30.6	9.0	37 16.37	36 57.3	16 1.45	+14.68	+0 28.33	+ 9.90	-0.68	- 6.30	7 38 2.34	51 6 27.9
7 38 27.5	8.8	39 13.41	38 54.2	9 40.65	+14.73	+0 28.33	+10.96	-0.69	- 6.20	7 39 59.37	51 12 49.3
7 39 28.8	8.0	40 13.90	40 2.3	41 30.50	+ 8.80	+0 28.33	+10.66	-0.72	- 6.30	7 40 59.92	51 40 52.8
7 41 2.2	8.3	41 47.59	41 28.4	25 42.35	+14.49	+0 28.34	+10.76	-0.73	- 6.30	7 42 33.65	51 56 46.2
7 42 11.3	9.2	42 56.72	42 40.6	6 29.70	+12.33	+0 28.33	+10.24	-0.73	- 6.10	7 43 42.60	51 15 56.1
7 43 28.4	9.0	44 14.55	43 57.0	18 36.10	+13.54	+0 28.33	+10.52	-0.73	- 6.00	7 45 0.38	51 3 50.8
7 45 21.3	8.9	46 6.82	45 46.0	53 17.70	+15.85	+0 28.32	+10.88	-0.75	- 6.10	7 46 52.68	51 29 11.3
7 47 11.4	8.3	47 56.28	47 42.4	41 28.75	+10.55	+0 28.32	+10.71	-0.77	- 6.10	7 48 42.14	51 40 54.1
7 48 29.0	9.0	49 14.61	48 55.9	54 45.50	+14.26	+0 28.32	+11.25	-0.77	- 6.00	7 50 0.40	51 27 41.3
7 49 35.8	8.5	50 20.00	50 1.2	22 14.05	+14.48	+0 28.32	+10.11	-0.77	- 5.80	7 51 5.68	51 0 11.8
7 51 15.9	9.5	52 3.36	51 48.7	43 43.10	+11.17	+0 28.32	+11.22	-0.79	- 5.90	7 52 49.13	51 38 39.9
7 53 46.4	8.8	54 32.55	54 15.5	5 19.10	+13.02	+0 28.32	+ 9.96	-0.80	- 5.70	7 55 18.20	51 17 3.9
7 56 35.5	8.5	57 19.30	57 0.1	7 42.40	+14.71	+0 28.32	+10.50	-0.82	- 5.60	7 58 4.89	51 14 42.1
7 57 33.5	5.0	58 17.19	58 5.0	30 25.85	+ 9.22	+0 28.32	+10.67	-0.83	- 5.80	7 59 2.88	51 51 52.8
7 58 25.9	8.0	59 10.36	58 57.7	4 28.65	+ 9.72	+0 28.32	+11.06	-0.83	- 5.60	7 59 55.92	51 17 50.9
8 3 20.2	9.0	4 3.89	3 42.4	9 29.55	+16.49	+0 28.31	+10.90	-0.85	- 5.40	8 4 49.33	51 12 55.2
8 5 6.7	8.2	5 50.63	5 32.6	12 30.60	+13.82	+0 28.31	+10.38	-0.87	- 5.30	8 6 36.02	51 9 50.6
8 7 34.7	9.0	8 18.91	7 59.2	31 7.20	+14.90	+0 28.31	+10.76	-0.90	- 5.40	8 9 4.36	51 51 14.6
8 8 42.2	8.8	9 26.56	9 9.8	38 4.85	+12.74	+0 28.31	+11.14	-0.90	- 5.30	8 10 11.97	51 44 14.9

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
8 9 34.2	8.3	10 18.71	10 12.9	39 35.90	+ 4.40	+0 28.31	+11.52	-0.91	- 5.40	8 11 4.10	51 42 35.6
8 10 33.2	9.3	11 19.52	11 5.7	41 56.65	+10.48	+0 28.31	+10.82	-0.91	- 5.30	8 12 4.88	51 40 20.0

ZONE 32, MARCH 1, 1871.

8 21 7.5	8.3	21 49.01	21 34.9	14 39.65	+10.83	+0 29.01	+10.60	-0.94	- 4.80	8 22 34.77	51 7 33.5
8 22 9.6	9.0	22 52.81	22 37.0	11 24.05	+12.13	+0 29.01	+ 9.79	-0.94	- 4.70	8 23 38.55	51 10 49.4
8 24 27.1	9.5	25 10.33	24 51.1	15 47.00	+15.10	+0 29.01	+ 9.60	-0.95	- 4.70	8 25 56.01	51 6 28.6
8 28 4.9	8.5	28 48.17	28 26.1	27 29.15	+16.69	+0 29.02	+10.94	-1.00	- 4.70	8 29 33.90	51 54 48.3
8 28 30.2	8.4	29 18.09	29 53.0	26 54.30	-26.35	+0 29.02	+10.63	-1.00	- 4.70	8 30 3.81	51 54 39.8
8 30 7.9	6.8	30 49.55	30 28.5	30 12.90	+15.87	+0 29.02	+10.33	-1.01	- 4.60	8 31 35.19	51 52 2.7
8 31 47.1	8.9	32 28.79	32 8.8	16 27.30	+15.38	+0 29.01	+ 9.72	-0.99	- 4.40	8 33 14.30	51 5 47.0
8 33 5.5	9.0	33 47.27	33 29.8	31 43.90	+13.24	+0 29.02	+10.72	-1.02	- 4.50	8 34 32.87	51 50 28.8
8 35 17.1	9.2	35 58.09	35 35.5	5 32.85	+17.31	+0 29.01	+ 9.65	-1.02	- 4.30	8 36 43.54	51 16 42.4
8 37 48.7	9.0	38 31.10	38 7.5	43 2.85	+17.92	+0 29.02	+10.71	-1.04	- 4.20	8 39 16.56	51 39 13.5
8 38 58.7	8.5	39 40.56	39 23.1	14 13.60	+13.44	+0 29.01	+10.01	-1.03	- 4.10	8 40 25.91	51 7 57.3
8 44 4.8	9.1	44 46.19	44 26.5	39 14.15	+14.94	+0 29.02	+11.16	-1.07	- 4.00	8 45 31.51	51 42 58.2
8 46 51.6	8.0	47 32.62	47 15.8	8 59.25	+12.88	+0 29.01	+10.55	-1.07	- 3.70	8 48 17.79	51 13 10.0
8 55 5.1	7.4	55 45.48	55 54.9	2 33.30	- 7.22	+0 29.01	+10.42	-1.10	- 3.40	8 56 30.47	51 19 13.9
8 56 5.1	9.6	56 45.88	57 2.2	54 9.70	-12.43	+0 29.02	+10.93	-1.13	- 3.40	8 57 30.86	51 27 32.6
9 0 24.7	9.2	1 4.72	0 45.1	47 36.90	+14.91	+0 29.02	+10.64	-1.15	- 3.20	9 1 49.60	51 34 31.6
9 1 48.7	6.3	2 28.16	2 12.4	25 11.25	+12.18	+0 29.02	+ 9.36	-1.13	- 3.00	9 3 12.94	50 56 53.0
9 4 27.6	9.2	5 7.90	4 55.1	24 12.25	+ 9.87	+0 29.01	+10.41	-1.14	- 2.90	9 5 52.60	50 57 50.2
9 6 2.1	8.8	6 41.31	6 24.4	10 13.25	+13.04	+0 29.01	+ 9.62	-1.15	- 2.90	9 7 26.01	51 11 51.2
9 6 59.8	9.0	7 39.17	7 22.0	31 35.45	+13.01	+0 29.02	+10.77	-1.18	- 2.90	9 8 23.93	51 50 29.9
9 9 52.7	8.4	10 31.66	10 12.2	20 48.15	+15.02	+0 29.01	+ 9.56	-1.16	- 2.60	9 11 16.23	51 1 17.7
9 10 58.7	8.0	11 37.19	11 19.5	32 25.35	+13.39	+0 29.02	+10.93	-1.20	- 2.70	9 12 21.85	51 49 39.9
9 13 9.2	9.0	13 47.90	13 19.0	3 40.25	+22.12	+0 29.01	+10.51	-1.19	- 2.50	9 14 32.42	51 18 33.0
9 14 43.2	9.2	15 22.00	15 3.0	39 51.95	+14.41	+0 29.02	+11.38	-1.21	- 2.50	9 16 6.54	51 42 14.0
9 16 16.7	9.7	16 55.46	16 33.5	28 12.60	+16.60	+0 29.03	+11.26	-1.18	- 2.40	9 17 40.03	51 53 55.2
9 21 33.7	8.6	22 11.80	21 54.8	24 38.10	+13.11	+0 29.02	+10.51	-1.21	- 2.00	9 22 56.08	50 57 24.7
9 25 56.2	9.2	26 35.60	26 9.0	18 32.15	+20.47	+0 29.02	+10.23	-1.23	- 1.80	9 27 19.77	51 3 37.0
9 27 49.8	8.7	28 26.87	28 48.2	5 26.80	-16.31	+0 29.02	+ 9.79	-1.23	- 1.80	9 29 11.03	51 16 4.7
9 31 31.2	8.4	32 9.10	31 51.1	52 49.65	+13.72	+0 29.03	+10.66	-1.26	- 1.60	9 32 53.18	51 29 12.2
9 31 54.3	...	32 30.20	32 49.3	52 25.30	-12.11	+0 29.03	+10.55	-1.26	- 1.60	9 33 14.27	51 29 10.5
9 32 56.1	6.5	33 33.95	33 54.0	31 25.05	-15.20	+0 29.03	+10.72	-1.28	- 1.60	9 34 18.03	51 50 7.6
9 37 55.1	8.7	38 32.11	38 15.5	50 5.50	+12.64	+0 29.03	+10.02	-1.28	- 1.30	9 39 16.03	51 31 53.4
9 44 19.7	8.4	44 56.14	44 38.0	5 7.95	+13.86	+0 29.02	+ 9.75	-1.29	- 0.90	9 45 39.85	51 16 51.2
9 45 26.9	9.3	46 3.62	45 48.4	27 48.60	+11.48	+0 29.02	+11.19	-1.32	- 0.90	9 46 47.36	51 54 9.4
9 46 22.0	8.4	46 58.53	46 42.0	35 3.85	+12.49	+0 29.03	+10.36	-1.32	- 0.90	9 47 42.24	51 46 54.2

ZONE 33, MARCH 2, 1871.

6 2 20.4	6.8	3 7.51	2 46.1	10 51.40	+16.42	+0 27.35	+ 9.69	+0.05	- 8.50	6 3 53.85	51 12 6.2
6 8 26.4	9.5	9 12.94	8 55.0	20 50.10	+13.78	+0 27.35	+ 9.54	+0.00	- 8.40	6 9 59.18	51 2 2.7
6 11 54.3	8.6	12 43.33	12 21.6	46 11.35	+16.50	+0 27.33	+10.26	-0.03	- 8.50	6 13 29.66	51 36 43.6
6 12 58.8	6.5	13 47.05	13 28.6	14 41.55	+14.14	+0 27.35	+10.62	-0.04	- 8.40	6 14 33.27	51 8 11.1
6 14 20.9	8.9	15 10.31	14 49.3	26 33.30	+15.85	+0 27.33	+10.78	-0.05	- 8.60	6 15 56.69	51 56 20.6
6 14 23.3	...	15 12.37	14 47.4	26 33.30	+18.87	+0 27.34	+10.73	-0.05	- 8.60	6 15 58.76	51 56 23.6
6 19 7.2	9.0	19 56.31	19 38.0	31 24.85	+13.81	+0 27.33	+10.67	-0.09	- 8.50	6 20 42.62	51 51 25.3
6 23 1.7	8.8	23 49.20	23 25.3	11 48.45	+18.34	+0 27.35	+ 9.89	-0.12	- 8.30	6 24 35.33	51 11 4.3
6 23 52.6	9.6	24 42.41	25 8.5	28 56.55	-19.73	+0 27.33	+11.24	-0.13	- 8.50	6 25 28.67	51 53 19.0

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
6 25 8.5	9.4	25 57.94	25 41.3	37 40.20	+12.58	+0 27.33	+10.86	-0.14	- 8.40	6 26 44.16	51 45 6.9
6 35 22.9	9.4	36 12.16	35 45.1	34 7.50	+20.51	+0 27.32	+11.19	-0.22	- 8.30	6 36 58.26	51 48 44.4
6 41 26.3	9.2	42 14.86	41 51.7	50 35.70	+17.67	+0 27.33	+10.03	-0.26	- 8.00	6 43 08.83	51 32 10.4
6 42 7.8	8.2	42 54.05	43 9.3	34 45.20	-11.59	+0 27.33	+11.49	-0.27	- 8.10	6 43 40.07	51 47 32.8
6 44 12.3	9.3	45 08.9	44 33.8	10 3.60	+20.78	+0 27.34	+ 9.44	-0.28	- 7.90	6 45 46.76	51 12 44.2
6 45 34.1	9.2	46 24.08	46 4.2	24 42.10	+15.01	+0 27.32	+11.62	-0.30	- 8.10	6 47 10.08	51 58 1.4
6 47 48.3	7.5	48 35.38	48 7.9	24 15.40	+21.20	+0 27.34	+10.23	-0.30	- 7.80	6 49 21.16	50 58.32.5
6 50 2.2	8.4	50 50.99	50 24.0	27 14.90	+20.38	+0 27.32	+10.84	-0.33	- 7.90	6 51 36.92	51 55 31.9
6 50 55.8	8.0	51 42.96	51 29.0	38 2.50	+10.61	+0 27.32	+10.93	-0.34	- 7.80	6 52 28.83	51 44 34.4
6 52 38.8	9.6	53 27.60	53 3.5	8 20.05	+18.48	+0 27.34	+10.30	-0.34	- 7.70	6 54 13.37	51 14 23.6
6 59 13.0	8.3	0 0.40	59 36.4	25 22.70	+18.11	+0 27.32	+10.47	-0.41	- 7.80	7 0 46.19	51 57 18.5
7 3 17.3	9.8	4 5.10	4 30.3	22 33.20	-19.42	+0 27.34	+10.94	-0.41	- 7.40	7 4 50.66	50 59 29.9
7 6 26.5	8.2	7 14.33	6 52.3	30 26.45	+16.63	+0 27.32	+10.40	-0.46	- 7.60	7 7 59.99	51 52 10.9
7 8 4.1	8.0	8 51.69	8 27.9	39 35.30	+18.05	+0 27.32	+11.29	-0.46	- 7.60	7 9 37.31	51 43 3.9
7 9 30.6	9.2	10 20.55	9 56.3	15 52.40	+18.68	+0 27.34	+ 9.59	-0.47	- 7.30	7 11 6.02	51 6 45.5
7 10 35.0	8.8	11 21.27	11 5.4	5 51.95	+12.18	+0 27.34	+ 9.90	-0.48	- 7.40	7 12 6.76	51 16 39.3
7 18 33.1	9.6	19 20.65	18 54.1	17 22.20	+20.38	+0 27.33	+ 9.92	-0.53	- 7.10	7 20 5.96	51 5 14.9
7 20 12.3	8.5	20 59.85	20 45.8	35 25.90	+10.60	+0 27.31	+10.39	-0.56	- 7.20	7 21 45.25	51 47 1.3
7 23 27.0	8.4	24 15.47	23 47.0	33 44.65	+21.57	+0 27.32	+11.09	-0.56	- 7.10	7 25 0.85	51 48 53.2
7 27 41.9	9.1	28 29.05	28 11.7	54 43.90	+13.27	+0 27.32	+11.05	-0.60	- 6.90	7 29 14.27	51 27 44.5
7 32 46.6	9.2	33 33.20	33 7.4	21 59.45	+19.87	+0 27.33	+ 9.73	-0.64	- 6.60	7 34 18.23	51 0 32.9
7 39 13.5	9.5	40 1.20	39 36.7	52 49.40	+18.67	+0 27.32	+10.53	-0.68	- 6.60	7 40 46.21	51 29 40.5
7 41 59.2	....	42 46.67	42 19.0	38 34.65	+21.01	+0 27.31	+10.93	-0.70	- 6.50	7 43 31.67	51 43 57.2
7 47 15.0	10.0	48 2.35	47 42.6	51 12.10	+15.08	+0 27.32	+ 9.96	-0.73	- 6.30	7 48 47.22	51 31 11.4
7 48 29.0	9.0	49 15.53	48 56.3	54 43.75	+14.65	+0 27.32	+11.04	-0.74	- 6.30	7 50 0.35	51 27 40.0
7 53 46.4	8.3	54 33.57	54 7.5	5 24.05	+19.99	+0 27.33	+ 9.68	-0.77	- 6.10	7 55 18.26	51 17 2.3
ZONE 34, MARCH 5, 1871.											
6 2 20.4	6.7	3 5.03	2 47.5	10 49.60	+13.43	+0 29.68	+ 9.67	+0.12	- 8.70	6 3 53.77	51 12 6.1
6 8 26.4	9.0	9 10.50	9 0.7	20 44.55	+ 7.55	+0 29.68	+ 9.52	+0.08	- 8.60	6 9 19.15	51 2 3.1
6 11 54.3	8.4	12 40.87	12 17.6	46 12.00	+17.71	+0 29.68	+10.20	+0.04	- 8.70	6 13 29.62	51 36 45.1
6 12 58.8	6.0	13 44.69	13 30.1	14 38.85	+11.22	+0 29.68	+10.57	+0.04	- 8.60	6 14 33.32	51 8 11.9
6 14 20.9	8.8	15 7.75	14 51.5	26 29.90	+12.23	+0 29.68	+10.81	+0.03	- 8.80	6 15 16.56	51 56 21.5
6 14 23.3	....	15 9.89	14 49.9	26 29.90	+15.10	+0 29.68	+10.72	+0.03	- 8.80	6 15 58.70	51 56 24.2
6 19 7.2	8.7	19 53.79	19 37.3	31 22.75	+12.48	+0 29.68	+10.63	-0.01	- 8.80	6 20 42.53	51 51 27.0
6 23 1.7	7.7	23 46.86	23 26.2	11 45.50	+15.89	+0 29.68	+ 9.87	-0.04	- 8.50	6 24 35.40	51 11 5.8
6 23 52.6	9.2	24 39.83	24 31.9	29 23.05	+ 5.97	+0 29.68	+11.46	-0.05	- 8.70	6 25 28.52	51 13 19.4
6 25 8.5	9.2	25 55.46	25 38.3	37 41.15	+13.04	+0 29.68	+10.81	-0.05	- 8.70	6 26 44.12	51 45 7.3
6 25 51.3	8.8	26 39.25	26 52.2	46 31.00	- 9.89	+0 29.68	+10.36	-0.07	- 8.60	6 27 27.85	51 35 54.0
6 35 22.9	9.2	36 9.76	35 47.7	34 3.65	+16.73	+0 29.68	+11.19	-0.15	- 8.60	6 36 58.29	51 48 45.5
6 39 36.1	8.7	40 21.91	39 55.9	5 48.00	+19.91	+0 29.68	+ 9.71	-0.17	- 8.30	6 41 10.27	51 17 1.6
6 41 26.3	8.9	42 12.36	41 47.7	50 37.10	+18.81	+0 29.68	+ 9.95	-0.19	- 8.30	6 43 0.75	51 32 11.0
6 42 7.8	8.2	42 51.53	43 2.1	34 48.45	- 8.03	+0 29.68	+11.47	-0.20	- 8.40	6 43 39.97	51 47 34.0
6 44 12.3	9.4	44 58.55	44 34.9	10 0.35	+18.18	+0 29.68	+ 9.41	-0.21	- 8.20	6 45 46.83	51 12 45.8
6 45 34.1	9.1	46 21.62	46 3.0	24 41.45	+14.03	+0 29.68	+11.58	-0.23	- 8.40	6 47 10.15	51 58 2.0
6 47 48.3	7.8	48 32.98	48 11.3	24 10.15	+16.73	+0 29.68	+10.23	-0.24	- 8.10	6 49 21.16	50 58 34.2
6 50 2.2	7.8	50 48.59	50 23.9	27 13.10	+18.65	+0 29.68	+10.81	-0.26	- 8.30	6 51 36.95	51 55 32.8
6 50 55.8	7.0	51 40.56	51 27.0	38 2.85	+10.31	+0 29.68	+10.87	-0.27	- 8.20	6 52 28.86	51 44 34.6
6 52 38.8	9.2	53 25.14	53 5.1	8 16.90	+15.33	+0 29.68	+10.28	-0.27	- 8.10	6 54 13.32	51 14 24.5
6 56 28.2	9.4	57 14.11	56 51.9	57 10.30	+16.95	+0 29.69	+10.39	-0.31	- 8.10	6 58 2.26	51 24 51.5
6 59 13.0	7.8	59 57.82	59 37.2	25 9.75	+15.55	+0 29.69	+10.42	-0.34	- 8.20	7 0 46.05	51 57 19.7
7 0 30.6	8.9	10 17.93	10 1.5	15 46.70	+12.61	+0 29.69	+ 9.60	-0.40	- 7.70	7 11 5.82	51 6 46.0
7 10 35.0	8.2	11 18.77	11 10.3	5 46.35	+ 6.51	+0 29.69	+ 9.88	-0.41	- 7.80	7 12 6.68	51 16 40.0

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
7 17 14.0	8.5	17 59.03	17 38.1	17 37.45	+16.08	+0 29.69	+ 9.97	-0.44	- 7.60	7 18 46.80	51 4 56.6
7 18 33.1	9.4	19 18.13	18 54.6	17 21.35	+18.08	+0 29.69	+ 9.90	-0.47	- 7.50	7 20 5.86	51 5 14.3
7 20 12.3	8.0	20 57.25	20 40.7	35 27.15	+12.57	+0 29.69	+10.30	-0.49	- 7.60	7 21 45.10	51 47 2.8
7 23 27.0	7.8	24 12.95	23 56.6	33 36.00	+12.34	+0 29.69	+11.15	-0.50	- 7.50	7 25 0.76	51 48 53.6
7 27 41.9	9.0	28 26.55	28 4.7	54 48.70	+16.63	+0 29.69	+10.96	-0.53	- 7.40	7 29 14.21	51 27 43.7
7 32 46.6	9.2	33 30.90	33 13.0	21 54.50	+13.79	+0 29.69	+ 9.74	-0.57	- 7.10	7 34 18.36	51 0 32.5
7 39 13.5	9.6	39 58.74	39 26.8	52 55.40	+24.32	+0 29.69	+10.38	-0.62	- 7.00	7 40 46.18	51 29 40.8
7 41 59.2	9.6	42 44.29	43 6.1	37 58.05	-16.53	+0 29.69	+11.03	-0.65	- 7.00	7 43 31.72	51 43 57.1
7 48 29.0	9.6	49 13.11	48 45.9	54 48.30	+20.75	+0 29.69	+10.91	-0.68	- 6.80	7 50 0.36	51 27 42.2
7 51 15.9	9.5	52 2.14	51 42.8	43 42.80	+14.66	+0 29.69	+10.90	-0.71	- 6.70	7 52 49.36	51 38 40.8
ZONE 35, MARCH 5, 1871.											
8 21 7.5	8.0	21 48.23	21 34.0	14 37.80	+10.91	+0 29.63	+10.58	-0.88	- 5.50	8 22 34.67	51 7 34.2
8 22 9.6	9.0	22 52.15	22 35.8	11 22.05	+12.59	+0 29.63	+ 9.76	-0.88	- 5.50	8 23 38.57	51 10 50.5
8 24 27.1	9.3	25 9.49	24 53.9	15 42.45	+11.99	+0 29.63	+ 9.58	-0.90	- 5.40	8 25 55.84	51 6 28.8
8 28 4.9	8.8	28 47.57	28 29.4	27 23.55	+13.59	+0 29.62	+10.93	-0.95	- 5.40	8 29 33.95	51 54 49.6
8 28 30.2	...	29 17.37	29 12.6	27 23.55	+ 3.62	+0 29.62	+11.01	-0.95	- 5.40	8 30 3.74	51 54 39.7
8 30 7.9	7.8	30 48.93	30 28.0	30 10.90	+15.80	+0 29.62	+10.31	-0.96	- 5.30	8 31 35.22	51 52 3.4
8 31 47.1	8.6	32 28.05	32 10.2	16 23.70	+13.69	+0 29.62	+ 9.71	-0.94	- 5.10	8 33 14.22	51 5 47.7
8 33 5.5	8.8	33 46.57	33 30.4	31 42.25	+12.25	+0 29.62	+10.70	-0.97	- 5.20	8 34 32.82	51 50 28.2
8 35 17.1	...	35 57.37	35 35.0	5 31.50	+17.16	+0 29.62	+ 9.64	-0.97	- 5.00	8 36 43.48	51 16 42.4
8 37 48.7	9.1	38 30.40	38 15.7	42 55.45	+11.16	+0 29.62	+10.75	-0.99	- 5.00	8 39 16.51	51 39 12.9
8 38 58.7	8.4	39 39.90	39 19.2	14 16.00	+15.90	+0 29.62	+ 9.93	-0.99	- 4.80	8 40 25.90	51 7 56.1
8 44 4.8	9.2	44 45.45	44 28.2	39 11.70	+13.12	+0 29.62	+11.15	-1.02	- 4.70	8 45 31.42	51 42 57.6
8 46 51.6	8.2	47 31.90	47 12.5	8 58.75	+14.87	+0 29.62	+10.47	-1.02	- 4.50	8 48 17.73	51 13 11.1
8 55 5.1	7.0	55 44.76	55 29.7	2 50.45	+11.55	+0 29.62	+10.38	-1.05	- 4.20	8 56 30.41	51 19 14.2
8 56 5.1	9.3	56 44.98	57 3.1	54 5.75	-13.81	+0 29.62	+10.82	-1.08	- 4.20	8 57 30.61	51 27 33.8
9 0 24.7	9.7	1 3.94	0 46.9	47 32.75	+12.93	+0 29.62	+10.55	-1.11	- 4.00	9 1 49.46	51 34 32.4
9 1 48.7	6.5	2 27.42	2 10.3	25 10.45	+13.19	+0 29.61	+ 9.26	-1.10	- 3.80	9 3 12.82	51 56 53.5
9 4 27.6	9.0	5 7.18	4 51.0	24 13.70	+12.49	+0 29.61	+10.29	-1.11	- 3.60	9 5 52.51	50 57 50.1
9 6 2.1	8.6	6 40.59	6 23.8	10 11.95	+12.89	+0 29.61	+ 9.52	-1.12	- 3.60	9 7 25.92	51 11 51.1
9 6 59.8	8.8	7 38.57	7 25.5	31 32.40	+ 9.91	+0 29.61	+10.68	-1.15	- 3.70	9 8 23.95	51 50 28.5
9 9 52.7	8.6	10 31.04	10 15.2	20 43.75	+12.17	+0 29.61	+ 9.43	-1.13	- 3.40	9 11 16.24	51 1 17.8
9 10 58.7	8.0	11 36.65	11 20.5	32 22.25	+12.18	+0 29.61	+10.86	-1.17	- 3.50	9 12 21.93	51 49 40.4
9 13 9.2	9.3	13 47.20	13 26.0	3 34.30	+16.22	+0 29.61	+10.48	-1.17	- 3.30	9 14 32.34	51 18 31.7
9 14 43.2	9.5	15 21.32	14 59.6	39 50.10	+16.46	+0 29.61	+11.23	-1.18	- 3.30	9 16 6.48	51 42 16.5
9 15 44.7	9.4	16 22.95	16 11.0	17 15.15	+ 9.15	+0 29.61	+ 9.98	-1.17	- 3.30	9 17 8.00	51 4 42.7
9 21 33.7	9.0	22 11.14	21 46.8	24 42.20	+18.74	+0 29.61	+10.34	-1.18	- 2.80	9 22 56.04	51 57 24.8
9 25 56.2	9.4	26 34.90	26 17.6	18 22.50	+13.31	+0 29.61	+10.18	-1.20	- 2.60	9 27 19.69	51 3 38.1
9 27 49.8	8.8	28 26.25	28 14.8	5 49.70	+ 8.81	+0 29.61	+ 9.86	-1.22	- 2.60	9 29 11.01	51 16 5.7
9 31 31.2	9.0	32 8.50	31 52.1	52 47.15	+12.50	+0 29.61	+10.56	-1.24	- 2.40	9 32 53.18	51 29 12.1
9 31 54.3	9.2	32 29.72	33 10.0	52 7.90	-30.72	+0 29.61	+10.01	-1.24	- 2.40	9 33 14.39	51 29 7.5
9 37 55.1	8.8	38 31.53	38 5.6	50 10.60	+19.72	+0 29.61	+ 9.83	-1.27	- 2.10	9 39 16.04	51 31 53.9
9 44 19.7	8.9	44 55.58	44 28.2	5 12.45	+20.98	+0 29.61	+ 9.56	-1.29	- 1.80	9 45 39.88	51 16 52.2
9 46 22.0	9.2	46 57.93	46 39.6	35 4.60	+13.86	+0 29.60	+11.48	-1.32	- 1.70	9 47 42.21	51 46 54.6
ZONE 36, MARCH 7, 1871.											
6 20 41.0	8.3	21 25.32	21 2.7	39 7.95	+17.52	+0 29.97	+10.02	+0.03	- 8.53	6 22 14.12	50 43 45.9
6 22 56.8	9.0	23 40.43	23 19.2	26 26.55	+16.71	+0 29.97	+ 8.54	+0.02	- 8.29	6 24 29.03	49 56 24.5
6 24 36.3	8.0	25 21.02	25 6.7	24 8.25	+11.26	+0 29.97	+ 9.30	+0.00	- 8.28	6 26 9.60	49 58 37.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	' "
6 26 26.8	9.0	27 11.83	26 50.5	11 0.20	+16.69	+0 29.98	+ 8.52	-0.01	- 8.30	6 28 0.46	50 11 49.6
6 27 45.4	9.4	28 30.46	28 7.0	49 56.90	+18.28	+0 29.97	+10.02	-0.03	- 8.42	6 29 19.13	50 32 55.4
6 29 34.3	9.0	30 18.40	29 55.1	8 10.45	+18.24	+0 29.98	+ 9.28	-0.04	- 8.31	6 31 7.00	50 14 40.6
6 30 46.0	9.0	31 32.06	31 15.0	38 9.90	+13.25	+0 29.98	+ 9.88	-0.05	- 8.45	6 32 20.76	50 44 36.1
6 31 45.8	8.3	32 29.71	32 13.5	6 38.45	+12.68	+0 29.98	+ 9.01	-0.06	- 8.31	6 33 18.29	50 16 5.9*
6 32 32.3	8.5	33 16.73	33 5.1	.....	.....	+0 29.98	.....	-0.06	.....	6 34 5.34	.....
6 35 6.3	7.0	35 49.15	35 29.3	52 21.35	+15.50	+0 29.98	+ 9.44	-0.08	- 8.30	6 36 37.74	50 30 25.2
6 38 18.8	8.0	39 2.79	38 43.8	33 5.20	+15.01	+0 29.98	+ 8.84	-0.10	- 8.13	6 39 51.20	49 49 39.3
6 39 18.3	8.8	40 3.34	39 50.5	37 27.80	+ 9.92	+0 29.98	+ 9.76	-0.12	- 8.36	6 40 51.93	50 45 12.0
6 40 8.2	8.4	40 53.24	40 40.2	41 54.70	+10.09	+0 29.98	+ 9.75	-0.12	- 8.30	6 41 41.81	50 40 45.0
6 41 2.5	8.2	41 47.72	41 35.9	33 34.60	+ 9.13	+0 29.98	+10.10	-0.13	- 8.36	6 42 36.31	50 49 4.1
6 43 21.4	7.0	44 4.95	43 51.8	11 53.10	+10.04	+0 29.98	+ 9.00	-0.14	- 8.14	6 44 53.37	50 10 44.8
6 45 14.6	9.0	45 59.59	45 39.8	1 39.95	+15.47	+0 29.98	+ 9.07	-0.16	- 8.17	6 46 48.02	50 21 2.8
6 46 2.4	9.0	46 44.22	46 38.4	17 26.45	+ 4.56	+0 29.98	+ 9.06	-0.16	- 8.08	6 47 32.58	50 5 5.2
6 51 1.4	7.8	51 44.43	51 27.5	22 4.00	+13.30	+0 29.98	+ 8.82	-0.20	- 8.00	6 52 32.71	50 0 34.5
6 52 15.5	9.1	52 59.01	52 39.8	3 26.65	+15.01	+0 29.98	+ 9.46	-0.21	- 8.04	6 53 47.34	50 19 13.8
6 53 4.9	9.0	53 48.64	53 31.7	14 52.40	+13.27	+0 29.98	+ 9.66	-0.22	- 8.00	6 54 36.91	50 7 46.2
6 54 35.3	8.8	55 20.75	54 59.9	35 59.00	+16.10	+0 29.98	+ 9.37	-0.24	- 8.16	6 56 9.14	50 46 41.6
6 56 32.5	8.2	57 17.06	56 55.4	53 37.80	+16.91	+0 29.98	+ 9.65	-0.25	- 8.04	6 58 5.36	50 29 3.2
6 57 32.8	8.8	58 16.86	58 4.8	25 33.15	+ 9.53	+0 29.98	+ 8.45	-0.25	- 7.87	6 59 5.03	49 56 59.2
6 58 34.0	9.6	59 19.39	59 45.2	25 37.60	-19.91	+0 29.98	+ 9.59	-0.27	- 8.09	7 0 7.75	50 56 25.8
6 59 13.4	8.2	59 58.21	0 22.5	15 8.45	-19.07	+0 29.99	+ 8.40	-0.27	- 7.85	7 0 46.40	50 6 54.4
7 0 57.8	8.5	1 44.27	1 26.5	51 43.55	+13.86	+0 29.99	+ 9.30	-0.28	- 7.90	7 2 32.52	50 30 52.8
7 2 10.7	8.3	2 54.92	2 36.0	14 10.50	+14.83	+0 29.99	+ 9.45	-0.29	- 7.80	7 3 43.07	50 8 26.6
7 3 38.6	9.3	4 23.84	4 0.1	47 16.25	+18.42	+0 29.99	+ 9.44	-0.30	- 7.92	7 5 12.07	50 35 23.8
7 4 33.8	8.6	5 18.35	5 5.4	22 16.60	+10.23	+0 29.99	+ 8.90	-0.30	- 7.73	7 6 6.44	50 0 14.6
7 7 7.0	9.3	7 51.50	7 26.4	4 37.30	+19.63	+0 29.99	+ 9.65	-0.33	- 7.76	7 8 39.60	50 18 3.2
7 8 26.5	8.3	9 10.09	8 55.9	29 53.35	+11.20	+0 29.99	+ 9.40	-0.33	- 7.63	7 9 58.09	49 52 38.1
7 10 13.6	9.5	10 57.43	10 40.8	7 54.25	+13.00	+0 29.99	+ 9.29	-0.35	- 7.69	7 11 45.48	50 14 38.3
7 11 10.3	7.5	11 52.20	11 45.5	59 37.50	+ 5.23	+0 29.99	+ 9.89	-0.36	- 7.72	7 12 40.26	50 22 47.5
7 11 10.3	7.5	11 53.62	11 41.5	59 36.50	+ 9.45	+0 29.99	+ 9.87	-0.36	- 7.72	7 12 41.68	50 22 52.7
7 13 31.8	9.1	14 16.72	13 59.1	14 26.65	+13.81	+0 29.99	+ 9.51	-0.37	- 7.59	7 15 4.69	50 8 5.9
7 15 0.7	8.5	15 46.91	15 29.4	47 4.25	+13.60	+0 29.99	+ 9.45	-0.39	- 7.70	7 16 34.95	50 35 27.5
7 16 44.2	9.0	17 27.79	17 10.3	27 16.55	+13.80	+0 29.99	+ 8.80	-0.39	- 7.50	7 18 15.67	49 55 14.4
7 17 35.8	8.6	18 20.64	18 7.3	44 29.70	+10.33	+0 29.99	+10.11	-0.41	- 7.65	7 19 8.65	50 37 58.6
7 18 51.8	9.0	19 39.26	19 25.0	9 9.70	+11.20	+0 29.99	+ 9.60	-0.42	- 7.50	7 20 27.15	50 13 18.8
7 22 22.9	8.6	23 7.56	22 43.0	57 4.50	+19.19	+0 29.99	+ 9.20	-0.45	- 7.50	7 23 55.43	50 25 30.3
7 25 43.2	8.4	26 26.85	26 1.0	36 3.05	+20.05	+0 29.99	+ 9.32	-0.47	- 7.50	7 27 14.74	50 46 31.7
7 27 23.2	9.0	28 8.41	27 48.2	28 10.05	+15.93	+0 29.99	+ 8.97	-0.47	- 7.20	7 28 56.10	49 54 20.0
7 28 20.8	6.8	29 3.92	28 53.0	33 46.65	+ 8.43	+0 29.99	+10.18	-0.49	- 7.40	7 29 51.77	50 48 36.6
7 30 20.7	9.8	31 3.68	30 37.0	21 5.25	+21.00	+0 29.99	+ 8.50	-0.49	- 7.20	7 31 51.34	50 1 28.4
7 31 37.5	8.2	32 22.93	32 2.5	55 50.40	+15.91	+0 29.99	+ 8.96	-0.51	- 7.30	7 33 10.65	50 26 38.1
7 33 4.7	4.0	33 48.01	33 35.3	38 45.60	+ 9.84	+0 29.99	+10.05	-0.52	- 7.30	7 34 35.76	50 43 37.5
7 34 55.5	8.6	35 41.30	35 17.7	9 24.10	+18.49	+0 29.99	+ 9.55	-0.53	- 7.10	7 36 28.91	50 13 6.7
7 36 18.9	8.5	37 1.64	36 41.7	58 7.80	+15.53	+0 30.00	+ 9.46	-0.54	- 7.10	7 37 49.28	50 24 19.5
7 37 30.7	7.5	38 10.56	37 50.5	18 43.70	+15.80	+0 30.00	+ 9.26	-0.54	- 7.00	7 38 58.09	50 3 43.4
7 39 29.4	8.5	40 11.26	39 56.2	28 22.35	+11.66	+0 30.00	+10.13	-0.57	- 7.10	7 40 58.93	50 54 0.8
7 40 17.5	8.8	40 59.71	40 52.8	23 7.55	+ 5.43	+0 30.00	+ 9.13	-0.56	- 6.90	7 41 47.19	49 59 8.3
7 41 25.3	8.1	42 6.40	42 20.2	25 24.45	-10.87	+0 30.00	+ 8.40	-0.57	- 6.90	7 42 53.85	50 56 34.0
7 42 20.9	8.6	43 6.27	42 59.5	45 57.20	+ 5.28	+0 30.00	+ 9.27	-0.59	- 7.00	7 43 53.82	50 36 17.9
7 43 55.6	8.0	44 38.34	44 23.1	15 56.05	+11.93	+0 30.00	+ 8.64	-0.59	- 6.80	7 45 25.77	50 6 24.8
7 45 12.4	8.8	45 55.41	45 34.7	30 6.65	+15.99	+0 30.00	+ 9.24	-0.61	- 7.00	7 46 42.96	50 52 18.2
7 45 59.2	8.5	46 41.35	47 11.5	27 10.10	-23.72	+0 30.00	+ 8.62	-0.60	- 6.70	7 47 28.70	49 54 34.5
7 47 22.0	8.6	48 2.77	47 46.3	10 20.15	+12.93	+0 30.00	+ 8.62	-0.61	- 6.80	7 48 50.16	50 12 0.6
7 50 2.8	9.4	50 49.85	50 31.0	41 17.75	+14.59	+0 30.00	+ 9.36	-0.64	- 6.80	7 51 37.27	50 41 5.0
7 53 38.8	8.0	54 19.56	54 6.0	53 40.15	+10.60	+0 30.00	+ 9.76	-0.66	- 6.70	7 55 6.87	50 28 37.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
7 56 18.5	8.6	56 59.03	56 44.7	7 25.50	+11.20	+0 30.00	+ 9.20	-0.67	- 6.50	7 57 46.25	50 14 51.6
7 57 18.1	6.3	57 58.78	57 46.6	52 37.80	+ 9.50	+0 30.00	+ 9.54	-0.68	- 6.60	7 58 46.02	50 29 37.5
8 1 12.3	9.0	1 53.88	1 31.5	25 36.05	+17.65	+0 30.00	+ 8.38	-0.70	- 6.30	8 2 40.94	50 56 45.4
8 2 28.8	9.4	3 9.24	2 48.2	53 8.10	+16.36	+0 30.00	+ 9.58	-0.72	- 6.40	8 3 56.37	50 29 12.8
8 4 22.5	8.5	5 2.50	4 50.0	54 20.05	+ 9.74	+0 30.00	+ 9.94	-0.73	- 6.30	8 5 49.59	50 27 54.2
8 5 19.2	8.9	6 0.24	5 52.3	13 20.35	+ 6.20	+0 30.00	+ 9.35	-0.73	- 6.20	8 6 47.25	50 8 49.5
8 5 19.2	8.9	6 0.36	5 42.0	13 20.35	+14.44	+0 30.00	+ 9.28	-0.73	- 6.20	8 6 47.37	50 8 57.6
8 7 5.0	9.0	7 47.04	7 28.0	52 50.50	+14.80	+0 30.00	+ 9.53	-0.75	- 6.20	8 8 34.07	50 29 27.6
8 8 28.2	8.1	9 8.51	8 56.7	32 14.15	+ 9.32	+0 30.00	+ 9.80	-0.75	- 6.00	8 9 55.39	49 49 58.5
8 11 10.7	9.0	11 53.12	11 32.0	37 26.35	+16.35	+0 30.00	+ 9.69	-0.78	- 6.10	8 12 40.09	50 44 52.1
ZONE 37, MARCH 9, 1871.											
6 20 41.0	8.2	21 24.74	21 7.1	39 3.85	+13.64	+0 30.52	+ 9.58	+0.09	- 8.70	6 22 14.15	50 43 45.1
6 22 56.8	8.8	23 39.99	23 15.2	26 29.50	+19.55	+0 30.51	+ 8.08	+0.07	- 8.40	6 24 29.18	49 56 23.4
6 24 36.3	8.4	25 20.42	24 57.4	24 15.20	+18.11	+0 30.51	+ 8.82	+0.06	- 8.50	6 26 9.60	49 58 36.3
6 27 45.4	9.6	28 30.06	28 23.6	49 46.15	+ 5.06	+0 30.52	+ 9.70	+0.03	- 8.60	6 29 19.34	50 32 52.0
6 29 34.3	9.2	30 17.96	29 52.0	8 11.95	+20.36	+0 30.51	+ 8.78	+0.02	- 8.50	6 31 7.15	50 14 40.1
6 30 46.0	9.0	31 31.66	31 14.0	38 9.75	+13.71	+0 30.52	+ 9.39	0.00	- 8.60	6 32 20.95	50 44 35.7
6 32 32.3	9.0	33 16.25	32 46.4	6 52.60	+23.40	+0 30.51	+ 8.46	-0.01	- 8.50	6 34 5.40	50 16 1.1
6 38 18.8	8.0	39 2.35	38 33.1	33 13.40	+23.06	+0 30.51	+ 8.34	-0.05	- 8.30	6 39 51.34	49 49 38.0
6 39 18.3	8.0	40 2.86	39 55.7	37 22.35	+ 5.58	+0 30.52	+ 9.30	-0.07	- 8.50	6 40 52.04	50 45 12.0
6 40 8.2	8.4	40 52.82	40 43.1	41 50.90	+ 7.53	+0 30.52	+ 9.30	-0.07	- 8.50	6 41 41.98	50 40 45.1
6 41 2.5	8.6	41 47.32	41 44.1	33 26.15	+ 2.48	+0 30.52	+ 9.65	-0.08	- 8.50	6 42 36.50	50 49 4.9
6 43 21.4	7.8	44 4.55	43 44.1	11 56.60	+15.99	+0 30.51	+ 8.52	-0.09	- 8.30	6 44 53.55	50 10 46.2
6 45 14.6	9.0	45 59.13	45 37.4	1 40.10	+16.95	+0 30.51	+ 8.63	-0.11	- 8.30	6 46 48.14	50 21 3.2
6 46 2.4	8.8	46 43.66	46 34.8	17 29.15	+ 6.99	+0 30.51	+ 8.65	-0.11	- 8.30	6 47 32.60	50 5 3.9
6 51 1.4	8.2	51 43.99	51 22.2	22 6.10	+17.15	+0 30.51	+ 8.37	-0.15	- 8.20	6 52 32.85	50 0 35.2
6 52 15.5	8.7	52 58.51	52 39.6	3 25.10	+14.78	+0 30.51	+ 9.04	-0.16	- 8.20	6 53 47.42	50 19 14.1
6 54 35.3	9.3	55 20.23	55 1.3	35 57.85	+14.63	+0 30.52	+ 8.97	-0.19	- 8.40	6 56 9.21	50 46 40.2
6 56 32.5	8.7	57 16.48	56 54.8	53 36.00	+16.91	+0 30.52	+ 9.25	-0.20	- 8.20	6 58 5.37	50 29 4.1
6 57 32.8	8.3	58 16.44	58 4.2	25 32.00	+ 9.61	+0 30.51	+ 8.05	-0.20	- 8.00	6 59 5.19	49 56 59.4
6 58 34.0	9.3	59 18.89	59 6.7	26 8.05	+ 9.41	+0 30.52	+ 9.22	-0.22	- 8.30	7 0 7.84	50 56 23.7
6 59 13.4	8.5	59 57.77	1 18.8	15 12.00	-16.48	+0 30.51	+ 8.07	-0.22	- 8.10	7 0 46.53	50 6 52.4
7 2 10.7	8.8	2 54.54	2 37.2	14 8.65	+13.73	+0 30.51	+ 9.04	-0.24	- 8.00	7 3 43.26	50 8 26.3
7 3 38.6	9.0	4 23.40	4 7.0	47 9.80	+12.75	+0 30.52	+ 9.10	-0.25	- 8.20	7 5 12.21	50 35 23.6
7 4 33.8	8.6	5 17.97	5 8.2	22 13.05	+ 7.71	+0 30.51	+ 8.52	-0.25	- 8.00	7 6 6.63	50 0 14.6
7 7 7.0	9.0	7 51.06	7 29.0	4 33.70	+17.29	+0 30.51	+ 9.30	-0.28	- 8.00	7 8 39.73	50 18 3.5
7 8 26.5	8.8	9 9.61	8 50.0	29 55.75	+15.46	+0 30.51	+ 8.97	-0.28	- 7.90	7 9 58.18	49 52 38.9
7 10 13.6	9.3	10 57.05	10 36.5	7 55.85	+16.13	+0 30.51	+ 8.86	-0.30	- 7.90	7 11 45.67	50 14 38.8
7 11 10.3	7.5	11 51.68	11 38.1	59 40.45	+10.62	+0 30.52	+ 9.49	-0.31	- 8.00	7 12 40.32	50 22 48.8
7 11 10.3	7.5	11 53.12	11 34.2	59 40.45	+14.76	+0 30.52	+ 9.44	-0.31	- 8.00	7 12 41.76	50 22 52.9
7 13 31.8	8.6	14 16.24	13 57.2	14 27.60	+14.91	+0 30.51	+ 9.13	-0.32	- 7.80	7 15 4.78	50 8 5.0
7 15 0.7	8.8	15 46.43	15 25.8	47 5.35	+16.01	+0 30.52	+ 9.01	-0.34	- 7.90	7 16 35.05	50 35 27.7
7 17 35.8	8.7	18 20.16	18 0.8	44 33.50	+15.07	+0 30.52	+ 9.67	-0.36	- 7.90	7 19 8.75	50 37 58.4
7 18 34.8	9.0	19 18.74	19 6.2	9 41.00	+ 9.79	+0 30.51	+ 9.37	-0.37	- 7.70	7 20 7.20	50 12 45.2
7 19 51.3	9.2	20 37.12	21 1.5	25 54.05	-18.83	+0 30.52	+ 9.07	-0.38	- 7.90	7 21 25.72	50 56 2.6
7 22 22.9	9.0	23 7.06	22 50.4	56 57.50	+13.03	+0 30.52	+ 8.86	-0.40	- 7.70	7 23 55.51	50 25 30.2
7 25 43.2	8.2	26 26.31	26 16.9	35 48.80	+ 7.28	+0 30.52	+ 8.87	-0.43	- 7.80	7 27 14.77	50 46 32.0
7 31 37.5	...	32 22.39	32 9.5	55 44.15	+10.06	+0 30.52	+ 8.63	-0.47	- 7.50	7 33 10.68	50 26 37.5
7 33 4.7	...	33 47.51	33 29.6	38 47.35	+13.87	+0 30.52	+ 9.62	-0.48	- 7.50	7 34 35.83	50 43 38.7
7 34 55.5	8.6	35 40.80	35 20.4	9 20.35	+15.98	+0 30.51	+ 9.20	-0.48	- 7.30	7 36 28.98	50 13 7.0
7 36 18.9	8.8	37 1.20	36 42.0	58 6.10	+14.98	+0 30.52	+ 9.10	-0.50	- 7.30	7 37 49.40	50 24 19.7
7 37 30.7	8.0	38 10.14	37 55.5	18 39.00	+11.47	+0 30.51	+ 8.98	-0.50	- 7.20	7 38 58.22	50 3 42.9

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Med. to Horiz Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s "		h m s	° ' "
7 39 29.4	8.0	40 10.86	39 52.3	28 22.85	+14.36	+0 30.52	+ 9.74	-0.53	- 7.40	7 40 59.09	50 54 1.9
7 41 25.3	8.5	42 5.94	41 45.2	25 49.20	+16.31	+0 30.51	+ 8.10	-0.53	- 7.20	7 42 53.94	50 56 35.4
7 42 20.9	8.6	43 5.81	42 53.8	45 58.70	+ 9.32	+0 30.52	+ 8.90	-0.54	- 7.30	7 43 53.93	50 36 19.3
7 43 55.6	7.8	44 37.88	44 23.0	15 54.60	+11.70	+0 30.51	+ 8.31	-0.55	- 7.10	7 45 25.86	50 6 24.9
7 45 12.4	8.8	45 55.01	45 38.0	30 2.00	+13.13	+0 30.52	+ 8.91	-0.57	- 7.30	7 46 43.12	50 52 19.0
7 47 22.0	9.0	48 2.27	47 44.2	10 20.50	+14.19	+0 30.51	+ 8.27	-0.57	- 7.10	7 48 50.21	50 12 0.4
7 50 2.8	9.0	50 49.43	50 29.2	41 16.95	+15.83	+0 30.52	+ 9.00	-0.60	- 7.10	7 51 37.41	50 41 6.0
7 53 38.8	8.5	54 19.06	54 0.0	53 44.30	+14.88	+0 30.53	+ 9.38	-0.62	- 7.00	7 55 6.94	50 28 36.6
7 56 18.5	8.6	56 58.53	56 41.4	7 23.75	+13.39	+0 30.52	+ 8.86	-0.64	- 6.80	7 57 46.30	50 14 54.5
7 57 18.1	7.6	57 58.38	57 44.4	52 35.05	+10.90	+0 30.53	+ 9.20	-0.65	- 6.90	7 58 46.18	50 29 40.6
8 1 12.3	9.0	1 53.44	1 28.4	25 36.00	+19.70	+0 30.52	+ 8.03	-0.66	- 6.60	8 2 41.06	50 56 46.4
8 2 28.8	9.4	3 8.88	2 46.2	53 5.10	+17.68	+0 30.53	+ 9.23	-0.68	- 6.70	8 3 56.58	50 29 16.1
8 4 22.5	8.8	5 2.12	4 49.0	54 17.00	+10.21	+0 30.53	+ 9.59	-0.69	- 6.60	8 5 49.78	50 27 56.6
8 5 19.2	...	5 59.84	5 49.0	13 20.75	+ 8.47	+0 30.52	+ 9.02	-0.69	- 6.50	8 6 47.41	50 8 50.3
8 5 19.2	...	5 59.84	5 40.6	13 20.75	+15.06	+0 30.52	+ 8.95	-0.69	- 6.50	8 6 47.41	50 8 56.8
8 7 5.0	9.2	7 46.58	7 22.1	52 53.55	+19.08	+0 30.53	+ 9.17	-0.71	- 6.55	8 8 34.18	50 29 27.7
8 9 3.8	8.5	9 43.38	9 22.2	42 26.00	+16.45	+0 30.53	+ 8.26	-0.73	- 6.50	8 10 30.97	50 39 51.2
8 11 10.7	9.0	11 52.68	11 33.1	37 22.86	+15.18	+0 30.53	+ 9.36	-0.73	- 6.50	8 12 40.23	50 44 53.2
ZONE 38, MARCH 14, 1871.											
6 53 1.0	9.0	53 47.34	53 30.4	18 55.55	+12.72	+0 30.79	+11.43	-0.06	- 9.30	6 54 37.03	52 4 42.4
6 54 7.0	9.2	54 52.90	54 32.4	19 55.00	+15.44	+0 30.79	+11.63	-0.06	- 9.20	6 55 42.57	52 2 45.6
6 55 59.6	9.0	56 44.18	56 22.3	23 31.00	+16.51	+0 30.79	+11.23	-0.08	- 9.20	6 57 33.81	52 59 9.7
6 56 49.7	8.8	57 34.99	57 24.9	29 58.65	+ 7.46	+0 30.80	+11.20	-0.09	- 9.40	6 58 24.83	52 52 32.5
6 58 1.0	8.5	58 46.55	58 28.8	8 42.15	+13.35	+0 30.80	+11.55	-0.10	- 9.20	6 59 36.21	52 13 55.0
7 3 20.3	8.0	4 5.38	3 48.2	37 19.15	+12.75	+0 30.80	+11.79	-0.15	- 9.30	7 4 55.07	52 45 16.4
7 4 4.2	8.8	4 50.71	5 7.2	16 3.40	-12.41	+0 30.80	+10.82	-0.15	- 9.10	7 5 40.24	52 6 5.3
7 5 12.3	7.5	5 57.33	5 48.0	7 19.60	+ 6.97	+0 30.80	+11.31	-0.16	- 9.10	7 6 46.88	52 15 8.6
7 10 39.4	8.2	11 25.22	11 1.3	9 24.45	+17.93	+0 30.81	+11.66	-0.20	- 9.00	7 12 14.68	52 13 13.3
7 13 10.3	8.7	13 55.95	13 33.5	26 2.15	+16.53	+0 30.81	+11.63	-0.24	- 9.50	7 14 45.52	52 56 32.9
7 14 31.9	9.0	15 18.01	14 54.0	25 54.05	+17.71	+0 30.81	+11.61	-0.25	- 9.50	7 16 7.56	52 56 41.8
7 16 29.3	8.5	17 13.62	16 52.7	45 36.60	+15.54	+0 30.81	+11.20	-0.26	- 9.10	7 18 3.05	52 36 56.3
7 19 25.2	9.0	20 13.99	19 48.4	7 12.45	+19.18	+0 30.81	+11.15	-0.28	- 8.90	7 21 3.29	52 15 23.3
7 20 5.8	8.2	20 51.06	21 20.1	28 20.85	-21.42	+0 30.81	+12.08	-0.29	- 9.10	7 21 40.50	52 53 34.8
7 21 13.7	8.9	21 58.57	21 42.8	28 20.85	+11.67	+0 30.82	+12.20	-0.30	- 9.10	7 22 47.99	52 54 7.6
7 23 14.8	8.3	23 59.09	23 39.8	10 19.50	+14.48	+0 30.82	+10.70	-0.31	- 8.80	7 24 48.32	52 12 9.9
7 24 15.8	8.1	25 0.46	24 45.5	53 56.50	+11.19	+0 30.82	+11.91	-0.32	- 8.90	7 25 49.73	52 28 30.4
7 25 59.9	8.0	26 45.39	26 25.7	53 44.55	+14.69	+0 30.82	+11.82	-0.33	- 8.80	7 27 34.63	52 28 45.3
7 27 5.2	8.0	27 48.54	27 38.8	0 31.25	+ 7.25	+0 30.82	+11.00	-0.34	- 8.80	7 28 37.73	52 21 50.0
7 27 55.9	6.5	28 40.64	28 35.7	31 28.45	+ 3.62	+0 30.82	+11.78	-0.35	- 8.80	7 29 29.92	52 50 49.7
7 29 52.4	7.8	30 36.35	30 14.4	34 43.80	+13.55	+0 30.82	+12.38	-0.37	- 8.90	7 31 25.58	52 47 44.2
7 30 54.7	8.8	31 39.41	31 21.6	58 46.10	+13.30	+0 30.82	+11.77	-0.37	- 8.70	7 32 28.54	52 23 40.8
7 32 41.8	8.3	33 26.73	33 8.0	25 49.85	+13.80	+0 30.82	+11.64	-0.40	- 8.90	7 34 15.93	52 56 36.7
7 37 15.4	9.0	38 0.03	37 38.9	47 56.65	+15.70	+0 30.83	+11.72	-0.43	- 8.70	7 38 49.07	52 34 30.6
7 38 32.9	8.2	39 16.73	38 57.9	26 44.70	+13.87	+0 30.83	+11.84	-0.44	- 8.70	7 40 5.83	52 55 40.4
7 41 29.2	9.1	42 12.57	41 50.0	7 46.10	+16.94	+0 30.83	+11.32	-0.45	- 8.40	7 43 1.46	52 14 41.0
7 43 52.8	8.6	44 38.65	44 15.8	17 33.65	+17.16	+0 30.83	+11.09	-0.47	- 8.40	7 45 27.45	52 4 52.7
7 49 46.1	8.0	50 28.96	50 17.0	18 24.75	+ 9.03	+0 30.84	+11.37	-0.52	- 8.20	7 51 17.64	52 3 52.1
7 51 2.9	9.6	51 46.25	51 30.1	20 7.90	+12.20	+0 30.84	+10.50	-0.52	- 8.20	7 52 34.90	52 2 10.8
7 53 48.9	8.5	54 34.17	54 11.7	51 56.45	+16.76	+0 30.84	+11.40	-0.56	- 8.20	7 55 22.85	52 30 26.9
7 55 23.2	9.2	56 7.13	55 45.3	53 19.50	+16.26	+0 30.84	+11.70	-0.57	- 8.20	7 56 55.77	52 29 3.2
7 56 31.8	8.4	57 15.08	56 51.1	44 50.05	+17.83	+0 30.84	+12.19	-0.58	- 8.20	7 58 3.72	52 37 34.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
7 57 42.3	9.5	58 25.99	58 6.0	10 19.50	+15.00	+0 30.84	+10.69	-0.58	- 8.10	7 59 14.52	52 12 0.3
7 58 24.0	8.8	59 10.38	59 3.0	56 13.35	+ 5.52	+0 30.85	+11.25	-0.59	- 8.10	7 59 58.96	52 25 57.3
7 59 43.8	6.5	0 27.15	0 11.8	51 47.80	+11.47	+0 30.85	+11.44	-0.60	- 8.05	8 1 15.70	52 30 28.6
8 0 54.9	8.3	1 35.46	1 22.7	14 5.60	+ 9.62	+0 30.85	+11.59	-0.60	- 7.90	8 2 23.92	52 8 8.9
8 2 32.0	8.7	3 12.30	2 50.5	14 12.35	+16.38	+0 30.85	+11.53	-0.61	- 7.90	8 4 0.72	52 8 8.4
8 3 49.3	9.2	4 32.41	4 10.6	54 8.10	+16.26	+0 30.85	+11.87	-0.63	- 7.90	8 5 20.87	52 28 12.5
8 5 20.1	9.6	6 3.42	5 42.2	49 27.35	+15.78	+0 30.85	+12.04	-0.64	- 7.90	8 6 51.86	52 32 52.5
8 6 5.0	9.0	6 49.78	7 0.0	37 12.45	- 7.56	+0 30.85	+11.82	-0.65	- 7.90	8 7 38.24	52 44 43.6
8 7 19.1	9.2	8 0.82	7 41.6	24 19.70	+14.49	+0 30.85	+11.42	-0.64	- 7.70	8 8 49.11	51 57 57.8
8 8 6.3	8.8	8 47.33	9 4.0	29 3.00	-12.34	+0 30.85	+12.37	-0.67	- 7.90	8 9 35.76	52 52 48.2
8 29 45.4	8.3	30 24.04	30 13.1	10 31.00	+ 8.18	+0 30.87	+10.82	-0.81	- 7.00	8 31 11.84	52 11 33.9
8 31 2.2	9.0	31 42.19	31 23.4	52 1.30	+14.01	+0 30.82	+11.44	-0.83	- 7.10	8 32 29.95	52 30 9.6
8 33 30.3	8.5	34 10.45	33 52.3	28 34.75	+13.44	+0 30.87	+12.26	-0.86	- 7.10	8 34 58.26	52 53 35.7
8 36 1.6	9.4	36 42.13	36 22.4	22 15.80	+14.93	+0 30.87	+10.96	-0.85	- 6.80	8 37 29.73	51 59 54.5
8 37 24.0	9.0	38 4.96	37 46.4	47 14.50	+13.83	+0 30.87	+11.59	-0.88	- 6.90	8 38 52.63	52 34 54.8
8 41 24.3	9.2	42 4.92	41 41.2	14 16.05	+17.81	+0 30.88	+11.54	-0.89	- 6.60	8 42 52.41	52 7 56.4
ZONE 39, MARCH 22, 1871.											
8 42 21.8	8.2	43 17.47	43 1.8	57 23.75	+12.25	+0 13.19	+ 9.07	-0.70	- 7.50	8 43 47.14	50 24 39.9
8 42 49.1	8.5	43 44.63	44 1.0	30 52.80	-12.68	+0 13.20	+ 9.17	-0.71	- 7.55	8 44 14.36	50 50 45.8
8 45 25.8	8.2	46 21.13	46 2.3	3 21.05	+14.70	+0 13.20	+ 9.15	-0.72	- 7.30	8 46 50.71	50 18 44.6
8 49 34.7	8.5	50 30.02	50 15.0	9 21.45	+11.75	+0 13.20	+ 9.33	-0.75	- 7.20	8 50 59.48	50 12 40.4
8 52 52.9	7.5	53 47.04	53 30.0	55 44.20	+13.25	+0 13.20	+ 8.71	-0.78	- 7.15	8 54 16.44	50 26 17.8
8 55 27.2	8.3	56 22.88	56 2.7	34 41.30	+15.63	+0 13.21	+ 9.96	-0.80	- 7.20	8 56 52.28	50 47 23.6
8 56 15.8	8.2	57 10.34	57 3.1	15 24.90	+ 5.65	+0 13.20	+ 8.34	-0.79	- 6.95	8 57 39.61	50 6 28.4
8 57 16.4	9.2	58 12.84	57 56.4	11 7.50	+12.85	+0 13.20	+ 8.53	-0.80	- 6.95	8 58 42.09	50 10 53.0
8 58 47.0	...	59 42.83	59 29.9	32 54.55	+10.19	+0 13.20	+ 8.59	-0.80	- 6.70	9 0 11.99	49 49 3.2
8 59 47.5	8.5	0 41.88	1 0.0	1 19.35	-14.14	+0 13.20	+ 8.73	-0.82	- 6.90	9 1 11.09	50 20 13.8
9 1 4.2	9.2	1 59.08	1 48.5	38 51.85	+ 8.21	+0 13.20	+ 9.78	-0.84	- 6.90	9 2 28.30	50 43 4.3
9 2 1.8	9.1	2 56.72	2 47.3	58 34.50	+ 7.34	+0 13.20	+ 9.37	-0.84	- 6.80	9 3 25.87	50 23 20.3
9 2 51.8	9.1	3 46.26	3 34.0	5 32.95	+12.12	+0 13.20	+ 8.51	-0.84	- 6.70	9 4 15.37	50 16 25.6
9 7 15.3	9.6	8 6.64	7 44.2	58 54.20	+17.48	+0 13.20	+ 9.34	-0.87	- 6.60	9 8 35.66	50 23 9.7
9 9 33.2	9.1	10 25.94	10 1.7	38 25.95	+18.76	+0 13.20	+ 9.57	-0.89	- 6.60	9 10 54.94	50 43 38.9
9 10 31.2	8.6	11 25.82	11 12.9	13 50.90	+10.12	+0 13.20	+ 9.13	-0.89	- 6.40	9 11 54.71	50 8 4.8
9 11 34.6	9.2	12 29.30	12 13.1	44 21.35	+12.58	+0 13.20	+ 9.73	-0.91	- 6.50	9 12 58.22	50 37 37.0
9 12 36.4	9.1	13 31.06	13 44.0	16 59.20	-10.13	+0 13.20	+ 8.65	-0.90	- 6.30	9 13 59.88	50 4 35.4
9 12 36.4	7.2	13 31.48	13 49.7	16 59.20	-14.29	+0 13.20	+ 8.61	-0.90	- 6.30	9 14 0.30	50 4 31.2
9 14 49.7	7.0	15 43.18	15 21.7	33 16.65	+16.63	+0 13.21	+ 9.65	-0.93	- 6.40	9 16 12.05	50 48 45.1
9 16 16.7	9.2	17 11.43	16 51.4	13 11.15	+15.69	+0 13.20	+ 8.94	-0.92	- 6.20	9 17 40.17	50 8 48.8
9 17 30.0	9.1	18 25.57	18 4.4	22 55.55	+16.69	+0 13.20	+ 8.70	-0.93	- 6.10	9 18 54.25	49 59 5.0
9 18 43.2	9.5	19 37.89	19 18.4	56 48.15	+15.21	+0 13.20	+ 8.91	-0.95	- 6.10	9 20 6.59	50 25 10.8
9 21 47.2	9.2	22 42.35	22 29.5	55 23.20	+10.66	+0 13.20	+ 8.65	-0.96	- 6.10	9 23 10.97	50 26 29.7
9 22 54.7	9.0	23 46.51	23 30.9	40 16.10	+12.10	+0 13.20	+ 8.89	-0.98	- 6.10	9 24 15.13	50 41 38.8
9 23 58.8	8.9	24 52.07	24 34.7	12 3.50	+13.64	+0 13.20	+ 8.73	-0.97	- 5.90	9 25 20.60	50 9 52.8
9 25 20.2	8.6	26 14.26	26 6.0	32 14.90	+ 6.42	+0 13.22	+ 9.50	-1.00	- 6.00	9 26 42.84	50 49 34.5
9 27 45.3	8.4	28 37.22	28 22.0	30 3.75	+11.99	+0 13.21	+ 7.95	-0.99	- 5.70	9 29 5.61	49 51 49.5
9 28 19.7	9.0	29 11.46	29 29.2	28 11.55	-13.95	+0 13.21	+ 8.69	-1.00	- 5.70	9 29 39.83	49 53 16.4
9 29 17.8	9.0	30 11.30	30 20.7	59 31.80	- 7.34	+0 13.21	+ 9.55	-1.01	- 5.70	9 30 39.71	50 22 3.4
9 31 46.0	8.4	32 39.89	32 18.5	26 21.45	+16.87	+0 13.21	+ 8.28	-1.01	- 5.50	9 33 8.18	49 55 36.3
9 32 31.3	8.9	33 23.84	33 13.3	26 21.45	+ 8.28	+0 13.21	+ 8.37	-1.02	- 5.50	9 33 52.11	49 55 27.7
9 34 10.2	8.8	35 2.00	34 37.0	28 53.35	+19.31	+0 13.22	+ 9.82	-1.06	- 5.65	9 35 30.33	50 53 7.8
9 36 47.8	9.4	37 39.49	37 14.5	27 13.00	+19.70	+0 13.21	+ 8.41	-1.04	- 5.30	9 38 7.65	49 54 46.9
9 38 16.3	9.7	39 10.66	39 23.8	19 35.40	-10.30	+0 13.21	+ 9.19	-1.06	- 5.30	9 39 38.77	50 1 55.0

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
9 39 37.7	8.5	40 29.99	40 14.0	35 43.55	+12.39	+0 13.21	+ 9.07	-1.08	- 5.40	9 40 58.14	50 46 9.0
9 41 47.7	9.0	42 39.20	42 18.1	45 8.85	+16.46	+0 13.16	+ 8.70	-1.09	- 5.30	9 43 7.23	50 36 47.1
9 42 37.1	8.5	43 29.28	43 18.2	48 14.55	+ 8.63	+0 13.21	+ 9.46	-1.09	- 5.20	9 43 57.33	50 33 34.3
9 45 24.7	8.5	46 17.46	46 31.5	27 33.70	-10.81	+0 13.22	+ 9.64	-1.12	- 5.20	9 46 45.46	50 53 55.3
9 46 14.8	5.0	47 4.89	47 15.0	56 59.05	- 7.88	+0 13.21	+ 9.02	-1.11	- 5.10	9 47 32.81	50 24 32.2
9 48 9.3	9.5	48 59.26	48 35.5	27 46.95	+18.37	+0 13.22	+ 9.61	-1.14	- 5.10	9 49 27.18	50 54 10.8
9 49 18.0	6.0	50 7.72	49 48.3	38 42.20	+15.03	+0 13.21	+ 9.66	-1.14	- 5.10	9 50 35.58	50 43 12.0
9 50 25.5	8.5	51 14.78	50 58.2	47 17.40	+12.91	+0 13.21	+ 9.22	-1.14	- 4.90	9 51 42.59	50 34 34.3
9 51 8.5	8.7	52 1.08	51 52.8	41 39.05	+ 6.44	+0 13.21	+ 9.23	-1.15	- 4.90	9 52 28.88	50 40 6.0
9 53 27.0	7.5	54 16.66	53 59.4	53 2.10	+13.47	+0 13.21	+ 9.28	-1.15	- 4.70	9 54 44.38	50 28 49.8
9 55 2.8	9.0	55 52.37	55 34.4	35 56.25	+13.94	+0 13.21	+ 9.09	-1.17	- 4.70	9 56 20.07	50 45 55.7
9 57 9.5	8.5	57 59.35	57 37.8	32 11.45	+16.70	+0 13.22	+ 9.40	-1.18	- 4.60	9 58 27.00	50 49 43.3
10 1 5.2	7.0	1 52.32	1 36.8	14 34.30	+12.17	+0 13.21	+ 9.27	-1.18	- 4.30	10 2 19.79	50 7 15.4
10 15 55.5	9.0	16 43.71	16 26.5	32 33.35	+13.58	+0 13.22	+ 8.49	-1.24	- 3.60	10 17 10.73	49 49 15.3
10 21 58.5	8.3	22 45.81	22 25.4	2 41.90	+15.94	+0 13.22	+ 9.00	-1.29	- 3.30	10 23 12.67	50 19 9.0
10 24 14.7	9.0	25 2.17	24 38.9	33 13.35	+18.40	+0 13.22	+ 8.56	-1.28	- 3.10	10 25 28.94	49 48 39.4
10 24 55.0	7.6	25 41.25	25 35.4	32 10.20	+ 4.66	+0 13.22	+ 8.47	-1.28	- 3.10	10 26 8.00	49 49 28.6
10 26 4.0	9.1	26 51.78	26 35.8	36 41.50	+12.39	+0 13.23	+ 9.27	-1.33	- 3.20	10 27 18.55	50 45 5.6
10 27 59.3	8.7	28 47.18	28 28.0	34 33.60	+15.17	+0 13.22	+ 8.90	-1.30	- 2.90	10 29 13.83	49 47 16.0
10 29 50.7	8.4	30 36.98	30 18.3	30 25.25	+14.76	+0 13.22	+ 8.00	-1.31	- 2.80	10 31 3.58	49 51 22.9
10 31 7.6	9.7	31 55.09	31 35.9	6 26.50	+15.03	+0 13.22	+ 8.67	-1.33	- 2.80	10 32 21.67	50 15 22.4
10 33 23.9	8.5	34 10.63	33 50.2	8 9.30	+15.97	+0 13.22	+ 9.02	-1.33	- 2.70	10 34 37.15	50 13 40.7
10 35 11.1	6.8	35 57.74	35 42.9	54 27.85	+11.54	+0 13.22	+ 9.63	-1.35	- 2.70	10 36 24.21	50 27 18.1
ZONE 40, MARCH 25, 1871.											
8 52 52.9	7.2	53 46.86	53 33.4	55 45.25	+10.53	+0 13.28	+ 9.01	-0.72	- 7.60	8 54 16.40	50 26 14.6
8 54 27.8	9.5	55 23.05	55 2.9	33 33.15	+16.04	+0 13.28	+ 8.92	-0.72	- 7.40	8 55 52.44	49 48 31.9
8 55 27.2	7.8	56 22.72	56 10.2	34 34.75	+ 9.67	+0 13.28	+10.27	-0.74	- 7.60	8 56 52.25	50 47 24.9
8 56 15.8	8.0	57 10.20	57 1.5	15 28.20	+ 6.83	+0 13.28	+ 8.62	-0.73	- 7.40	8 57 39.61	50 6 26.9
8 57 16.4	9.3	58 12.56	58 1.6	11 5.25	+ 8.62	+0 13.28	+ 8.83	-0.74	- 7.40	8 58 41.95	50 10 51.6
8 59 47.5	8.1	0 41.61	0 24.5	1 48.35	+13.36	+0 13.28	+ 9.10	-0.76	- 7.40	9 1 10.96	50 20 12.9
9 1 4.2	9.2	1 58.80	1 46.9	38 54.55	+ 9.22	+0 13.28	+10.04	-0.78	- 7.40	9 2 28.16	50 43 3.2
9 2 1.8	8.8	2 56.46	2 43.5	58 38.85	+10.15	+0 13.28	+ 9.61	-0.78	- 7.30	9 3 25.75	50 23 19.2
9 7 15.3	9.7	8 6.62	7 49.9	58 50.40	+13.03	+0 13.28	+ 9.62	-0.82	- 7.10	9 8 35.77	50 23 9.6
9 9 33.2	9.0	10 25.72	10 4.8	38 21.15	+16.20	+0 13.28	+ 9.85	-0.84	- 7.10	9 10 54.85	50 43 41.7
9 10 31.2	8.8	11 25.62	11 10.6	13 53.10	+11.77	+0 13.28	+ 9.40	-0.83	- 7.00	9 11 54.65	50 8 4.7
9 11 34.6	8.9	12 29.08	12 16.3	44 19.50	+ 9.94	+0 13.28	+10.02	-0.85	- 7.00	9 12 58.14	50 37 36.8
9 14 49.7	7.2	15 43.04	15 28.4	33 10.95	+11.29	+0 13.28	+ 9.96	-0.88	- 7.00	9 16 12.03	50 48 45.9
9 16 16.7	8.8	17 11.25	16 56.9	13 8.20	+11.29	+0 13.28	+ 9.22	-0.87	- 6.80	9 17 40.12	50 8 47.8
9 17 30.0	9.0	18 25.33	18 14.8	22 48.95	+ 8.26	+0 13.28	+ 9.01	-0.88	- 6.70	9 18 54.14	49 59 3.6
9 18 43.2	9.5	19 37.63	19 24.4	56 45.90	+10.30	+0 13.28	+ 9.22	-0.90	- 6.70	9 20 6.46	50 25 8.7
9 21 47.2	9.0	22 42.23	22 29.9	55 22.85	+ 9.59	+0 13.28	+ 8.93	-0.91	- 6.60	9 23 10.98	50 26 30.1
9 22 54.7	8.8	23 46.43	23 33.8	40 14.55	+ 9.77	+0 13.28	+ 9.17	-0.93	- 6.60	9 24 15.18	50 41 38.6
9 23 58.8	8.6	24 52.01	24 38.0	12 1.60	+10.98	+0 13.28	+ 9.00	-0.92	- 6.50	9 25 20.67	50 9 52.4
9 25 20.2	8.9	26 14.20	25 58.7	32 19.05	+11.99	+0 13.28	+ 9.75	-0.95	- 6.60	9 26 42.89	50 49 36.4
9 27 45.3	8.7	28 37.18	28 17.6	30 7.35	+15.54	+0 13.28	+ 8.18	-0.94	- 6.30	9 29 5.69	49 51 49.8
9 28 19.7	...	29 11.24	29 41.2	28 2.15	-23.65	+0 13.28	+ 8.74	-0.95	- 6.20	9 29 39.78	49 53 16.3
9 29 17.8	8.7	30 11.30	30 3.6	59 43.20	+ 6.01	+0 13.28	+ 9.87	-0.95	- 6.31	9 30 39.84	50 22 5.8
9 31 46.0	8.8	32 39.83	32 19.6	26 21.35	+15.92	+0 13.28	+ 8.54	-0.96	- 6.10	9 33 8.24	49 55 35.9
9 32 31.3	9.0	33 23.72	33 14.8	26 21.35	+ 7.01	+0 13.28	+ 8.63	-0.97	- 6.10	9 33 52.11	49 55 27.0
9 34 10.2	8.7	35 1.82	34 44.6	28 48.60	+13.28	+0 13.28	+10.16	-1.00	- 6.25	9 35 30.27	50 53 7.0
9 36 47.8	9.1	37 39.51	37 21.0	27 10.55	+14.58	+0 13.28	+ 8.73	-0.99	- 5.90	9 38 7.79	49 54 44.7
9 38 16.3	9.7	39 10.56	38 54.7	20 1.75	+12.50	+0 13.28	+ 8.36	-1.01	- 5.90	9 39 38.79	50 1 50.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
9 39 37.7	8.9	40 29.75	40 14.3	35 44.85	+11.92	+0 13.28	+ 9.34	-1.04	- 6.00	9 40 58.01	50 46 7.7
9 41 47.7	9.0	42 38.98	42 13.2	45 12.20	+20.04	+0 13.28	+ 8.94	-1.05	- 5.90	9 43 7.17	50 36 47.8
9 42 37.1	8.5	43 29.18	43 19.7	48 14.40	+ 7.39	+0 13.28	+ 9.73	-1.05	- 5.80	9 43 57.34	50 33 33.6
9 45 24.7	8.7	46 17.48	46 0.0	27 58.80	+13.51	+0 13.28	+ 9.97	-1.08	- 5.80	9 46 45.58	50 53 55.0
9 46 14.8	6.0	47 4.83	46 54.0	57 15.55	+ 8.42	+0 13.28	+ 9.35	-1.07	- 5.60	9 47 32.86	50 24 32.6
9 48 9.3	9.2	48 59.26	48 37.4	27 47.55	+16.91	+0 13.28	+ 9.92	-1.09	- 5.70	9 49 27.29	50 54 9.3
9 49 18.0	6.5	50 7.62	49 51.9	38 38.35	+12.17	+0 13.28	+ 9.95	-1.09	- 5.70	9 50 35.60	50 43 13.5
9 50 25.5	8.7	51 14.74	50 57.0	47 20.25	+13.76	+0 13.28	+ 9.48	-1.10	- 5.50	9 51 42.66	50 34 32.7
9 51 8.5	8.8	52 1.00	51 56.2	41 37.00	+ 3.72	+0 13.28	+ 9.49	-1.11	- 5.50	9 52 28.91	50 40 5.8
9 53 27.0	8.0	54 16.50	54 1.7	53 1.75	+11.53	+0 13.28	+ 9.57	-1.11	- 5.30	9 54 44.33	50 28 48.7
9 55 2.8	8.7	55 52.31	55 38.7	35 52.25	+10.53	+0 13.28	+ 9.41	-1.13	- 5.30	9 56 20.12	50 45 56.8
9 57 9.5	8.8	57 59.37	57 42.4	32 10.10	+13.14	+0 13.28	+ 9.72	-1.14	- 5.20	9 58 27.12	50 49 41.6
10 1 5.2	7.5	1 52.30	1 29.8	14 40.45	+17.66	+0 13.27	+ 9.49	-1.14	- 4.90	10 2 19.87	50 7 15.1
10 15 55.5	9.0	16 43.65	16 27.8	32 33.20	+12.48	+0 13.27	+ 8.75	-1.21	- 4.10	10 17 10.75	49 49 14.9
10 21 58.5	8.4	22 45.87	22 27.2	2 41.25	+14.62	+0 13.27	+ 9.27	-1.26	- 3.90	10 23 12.81	50 19 8.8
10 24 14.7	8.9	25 2.13	24 46.8	33 8.05	+12.08	+0 13.27	+ 8.86	-1.26	- 3.70	10 25 28.97	49 48 38.9
10 24 55.0	8.6	25 41.29	25 33.3	32 12.85	+ 6.32	+0 13.27	+ 8.71	-1.26	- 3.70	10 26 8.11	49 49 28.1
10 26 4.0	9.0	26 51.64	26 37.8	36 39.15	+10.69	+0 13.27	+ 9.58	-1.30	- 3.80	10 27 18.48	50 45 6.8
10 27 59.3	8.9	28 47.12	28 31.5	34 31.60	+12.33	+0 13.27	+ 9.15	-1.27	- 3.50	10 29 13.85	49 47 15.6
10 29 50.7	8.2	30 36.90	30 21.1	30 23.60	+12.47	+0 13.27	+ 8.28	-1.28	- 3.50	10 31 3.58	49 51 22.6
10 31 7.6	9.6	31 54.93	31 38.6	6 24.45	+12.76	+0 13.27	+ 8.95	-1.30	- 3.50	10 32 21.59	50 15 22.6
10 33 23.9	8.8	34 10.45	33 49.5	8 10.10	+16.44	+0 13.27	+ 9.26	-1.31	- 3.35	10 34 37.04	50 13 40.7
10 35 11.1	7.1	35 57.72	35 40.0	54 31.80	+13.80	+0 13.27	+ 9.86	-1.33	- 3.30	10 36 24.26	50 27 16.8

ZONE 41, MARCH 28, 1871.

7 25 59.9	8.4	27 2.23	27 22.8	53 14.45	-15.36	+0 13.43	+11.82	+0.05	-10.20	7 27 34.46	52 28 44.6
7 27 5.2	8.2	28 5.62	28 16.6	0 17.10	- 8.22	+0 13.44	+11.13	+0.04	-10.10	7 28 37.81	52 21 48.2
7 27 55.9	7.5	28 57.64	.....	.....	.....	+0 13.45	.....	+0.03	.....	7 29 29.93	.....
7 29 52.4	8.4	30 53.29	30 35.8	34 44.40	+12.96	+0 13.45	+12.54	+0.01	-10.20	7 31 25.53	52 47 42.5
7 30 54.7	9.0	31 56.37	31 41.4	58 45.15	+11.21	+0 13.44	+11.93	0.00	-10.10	7 32 28.49	52 23 39.1
7 32 41.8	8.5	33 43.75	33 27.8	25 49.25	+11.81	+0 13.45	+12.03	-0.02	-10.30	7 34 15.96	52 56 35.0
7 37 15.4	9.0	38 16.97	37 57.2	47 54.70	+14.74	+0 13.45	+12.10	-0.05	-10.10	7 38 49.01	52 34 31.2
7 38 32.9	8.3	39 33.73	39 14.0	26 45.45	+14.54	+0 13.45	+12.06	-0.07	-10.20	7 40 5.82	52 55 39.7
7 41 29.2	8.9	42 29.61	42 4.2	7 48.75	+19.04	+0 13.45	+11.42	-0.09	-10.00	7 43 1.48	52 14 39.6
7 43 52.8	8.5	44 55.77	44 34.5	17 33.45	+16.03	+0 13.45	+11.25	-0.11	- 9.90	7 45 27.55	52 4 51.0
7 49 46.1	8.5	50 46.00	50 23.8	18 32.00	+16.71	+0 13.45	+11.44	-0.16	- 9.85	7 51 17.65	52 3 51.6
7 51 2.9	9.5	52 3.15	51 35.3	20 14.75	+21.01	+0 13.45	+10.55	-0.17	- 9.80	7 52 34.76	52 2 11.9
7 53 48.9	8.5	54 51.09	54 32.2	51 51.75	+14.08	+0 13.46	+11.59	-0.20	- 9.90	7 55 22.75	52 30 28.0
7 55 23.2	9.2	56 24.03	56 0.2	53 20.85	+17.75	+0 13.45	+11.82	-0.21	- 9.90	7 56 55.64	52 29 2.4
7 56 31.8	8.4	57 32.12	57 15.2	44 44.25	+12.56	+0 13.47	+12.38	-0.22	- 9.90	7 58 3.75	52 37 34.0
7 57 42.3	9.7	58 42.93	58 32.8	10 13.00	+ 7.58	+0 13.46	+10.92	-0.23	- 9.80	7 59 14.43	52 11 58.6
7 58 24.0	9.2	59 27.34	59 51.5	55 48.10	-18.06	+0 13.46	+11.18	-0.24	- 9.80	7 59 58.88	52 25 57.9
7 59 43.8	6.8	0 44.09	0 34.1	51 40.75	+ 7.45	+0 13.47	+11.60	-0.25	- 9.80	8 1 15.61	52 30 30.7
8 0 54.9	8.3	1 52.46	1 36.3	14 8.40	+12.17	+0 13.46	+11.69	-0.26	- 9.70	8 2 23.87	52 8 7.6
8 2 32.0	8.6	3 29.32	3 12.6	14 8.40	+12.55	+0 13.46	+11.68	-0.27	- 9.70	8 4 0.69	52 8 7.5
8 3 49.3	9.2	4 49.41	4 35.6	54 2.70	+10.29	+0 13.46	+12.07	-0.28	- 9.80	8 5 20.83	52 28 10.8
8 5 20.1	9.4	6 20.56	5 58.7	49 26.65	+16.31	+0 13.47	+12.16	-0.30	- 9.80	8 6 51.96	52 32 52.6
8 7 19.1	9.5	8 17.76	7 55.9	24 22.85	+16.52	+0 13.46	+11.53	-0.31	- 9.60	8 8 48.99	51 57 55.6
8 8 6.3	9.1	9 4.31	9 18.7	29 4.05	-10.64	+0 13.47	+12.53	-0.33	- 9.80	8 9 35.70	52 52 47.8
8 29 45.4	8.2	30 41.09	31 13.8	9 56.60	-24.54	+0 13.48	+11.75	-0.50	- 9.20	8 31 11.81	52 11 35.0
8 33 30.3	8.4	34 27.61	34 9.8	28 33.30	+13.15	+0 13.49	+12.41	-0.54	- 9.30	8 34 58.36	52 53 35.5
8 36 1.6	9.3	36 59.09	36 33.1	22 20.35	+19.60	+0 13.48	+11.03	-0.55	- 8.90	8 37 29.60	51 59 53.2
8 37 24.0	8.9	38 21.90	38 2.0	47 14.15	+14.80	+0 13.49	+11.72	-0.57	- 9.10	8 38 52.50	52 34 54.7

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Med. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
8 41 24.3	9.1	42 22.08	41 56.9	14 17.80	+18.93	+0 13.48	+11.65	-0.59	- 8.85	8 42 52.47	52 7 54.3
8 42 34.7	6.8	43 29.86	43 16.5	30 42.35	+ 9.90	+0 13.50	+11.74	-0.62	- 9.00	8 44 03.6	52 51 20.4
8 45 18.3	8.9	46 17.21	45 51.8	6 35.30	+19.08	+0 13.49	+11.18	-0.63	- 8.80	8 46 47.52	52 15 35.6
8 47 45.5	8.8	48 45.71	48 25.7	35 26.45	+14.81	+0 13.50	+11.51	-0.66	- 8.90	8 49 16.05	52 46 39.7
8 51 52.2	9.8	52 49.31	52 23.7	54 29.00	+19.10	+0 13.49	+12.05	-0.68	- 8.70	8 53 19.48	52 27 41.1
8 53 33.8	9.0	54 30.53	54 3.9	15 45.80	+20.00	+0 13.49	+10.79	-0.69	- 8.50	8 55 05.8	52 6 23.7
8 56 56.8	7.8	57 50.89	57 43.4	14 12.90	+ 5.63	+0 13.49	+11.76	-0.71	- 8.40	8 58 20.86	52 7 42.5
8 58 37.8	5.0	59 32.56	59 13.9	15 36.10	+14.06	+0 13.50	+10.85	-0.73	- 8.30	9 0 24.8	52 6 26.5
8 59 49.2	8.9	0 45.18	0 29.5	25 50.55	+11.85	+0 13.50	+10.74	-0.73	- 8.30	9 1 15.05	51 56 9.4
9 3 11.4	9.2	4 5.50	3 38.5	18 31.15	+20.32	+0 13.50	+11.37	-0.76	- 8.20	9 4 35.28	52 3 37.2
9 11 12.2	9.1	12 7.85	11 38.5	53 22.60	+21.83	+0 13.52	+11.34	-0.76	- 8.00	9 12 37.55	52 28 45.5
ZONE 42, MARCH 29, 1871.											
9 50 51.3	8.0	51 42.18	51 29.4	9 0.30	+ 9.81	+0 13.56	+10.59	-1.06	- 6.40	9 52 10.49	51 12 49.1
9 52 26.3	8.0	53 15.15	52 54.6	17 6.30	+15.84	+0 13.63	+ 9.91	-1.06	- 6.30	9 53 43.48	51 4 48.2
9 56 23.4	7.7	57 12.94	56 55.6	50 23.10	+13.18	+0 13.56	+10.11	-1.10	- 6.30	9 57 41.12	51 31 28.2
9 59 48.4	7.6	0 36.65	0 23.1	55 53.55	+10.30	+0 13.56	+10.17	-1.12	- 6.10	10 1 47.1	51 25 54.6
10 0 31.7	9.0	1 21.84	1 47.6	43 48.60	-19.60	+0 13.56	+10.87	-1.13	- 6.10	10 1 49.89	51 37 30.2
10 21 10.5	7.5	21 57.72	21 40.0	43 51.50	+13.45	+0 13.57	+11.01	-1.25	- 5.10	10 22 25.12	51 37 58.2
10 27 58.5	9.4	28 49.12	28 26.7	3 16.25	+17.14	+0 13.57	+10.48	-1.28	- 4.70	10 29 16.27	51 18 36.1
10 34 4.4	6.5	34 49.64	34 35.4	54 38.20	+10.83	+0 13.57	+11.01	-1.32	- 4.50	10 35 16.61	51 27 7.8
10 38 25.0	8.8	39 9.97	38 51.8	5 5.75	+13.93	+0 13.57	+ 9.78	-1.33	- 4.20	10 39 36.79	51 16 41.9
10 42 54.8	6.7	43 41.41	43 22.0	25 34.85	+14.97	+0 13.56	+10.55	-1.34	- 3.90	10 44 8.06	50 56 14.3*
10 44 33.8	8.9	44 16.69	44 29.2	40 56.10	- 9.49	+0 13.57	+10.45	-1.37	- 4.00	10 44 43.36	51 40 28.2
10 54 27.6	9.0	55 13.72	56 2.5	26 22.55	-37.66	+0 13.58	+ 9.09	-1.39	- 3.30	10 55 40.03	50 54 31.9
10 57 24.3	8.6	58 9.56	57 50.8	52 9.10	+14.32	+0 13.58	+10.45	-1.43	- 3.20	10 58 35.78	51 29 38.6
10 58 51.5	9.3	59 35.24	59 13.0	34 41.30	+16.81	+0 13.58	+11.35	-1.45	- 3.20	11 0 1.42	51 47 9.6
ZONE 43, APRIL 2, 1871.											
8 9 10.7	8.0	10 7.96	9 55.2	41 44.65	+ 9.72	+0 15.78	+10.37	-0.19	-10.00	8 10 41.53	51 40 28.4
8 12 49.1	8.8	13 44.69	13 26.0	44 20.80	+14.21	+0 15.79	+10.84	-0.22	- 9.90	8 14 18.18	51 37 56.2
8 17 1.5	8.9	17 58.30	17 42.4	52 26.25	+12.12	+0 15.79	+10.32	-0.25	- 9.80	8 18 31.66	51 29 47.0
8 21 21.0	7.6	22 14.97	22 2.0	19 22.40	+10.01	+0 15.79	+10.29	-0.29	- 9.60	8 22 48.13	51 2 47.8
8 24 28.9	8.2	25 22.76	25 10.0	28 17.55	+ 9.88	+0 15.78	+ 9.89	-0.31	- 9.50	8 25 55.81	50 53 51.2
8 28 15.3	8.8	29 9.47	28 52.7	16 13.90	+12.91	+0 15.79	+ 9.61	-0.34	- 9.50	8 29 42.47	51 5 56.6
8 32 40.1	8.5	33 33.36	33 18.5	56 0.55	+11.61	+0 15.78	+ 8.87	-0.37	- 9.20	8 34 6.13	50 26 7.0
8 35 57.5	8.8	36 50.07	36 33.3	36 26.95	+12.73	+0 15.79	+10.36	-0.42	- 9.50	8 37 22.98	51 45 42.0
8 38 34.4	9.2	39 28.12	39 13.5	48 8.95	+11.11	+0 15.79	+10.54	-0.44	- 9.40	8 40 0.93	51 33 58.0
8 49 34.7	....	50 27.24	50 16.5	9 20.85	+ 8.38	+0 15.78	+ 9.35	-0.51	- 8.80	8 50 59.52	50 12 39.9
8 53 2.0	9.3	53 56.01	53 42.0	46 58.70	+10.88	+0 15.78	+ 9.28	-0.54	- 8.80	8 54 28.25	50 35 3.6
8 58 54.8	....	59 46.31	59 29.0	34 2.90	+13.67	+0 15.78	+ 8.80	-0.57	- 8.40	9 0 18.28	49 48 0.7
9 8 37.7	9.3	9 30.84	9 14.3	51 58.40	+12.29	+0 15.80	+11.34	-0.70	- 8.90	9 10 2.94	52 30 3.4
9 14 51.6	....	15 42.73	15 31.0	39 25.05	+ 9.07	+0 15.79	+ 9.95	-0.71	- 8.10	9 16 14.38	50 42 31.5
9 28 38.9	....	29 29.40	29 12.5	56 17.25	+13.18	+0 15.79	+ 8.92	-0.81	- 7.70	9 30 0.61	50 25 39.8
9 31 15.9	9.3	32 5.77	31 55.7	32 14.55	+ 7.98	+0 15.79	+ 8.48	-0.81	- 7.60	9 32 36.84	49 49 36.4
9 34 43.4	8.6	35 33.32	35 16.7	22 8.15	+13.06	+0 15.79	+ 8.59	-0.84	- 7.40	9 36 4.30	49 59 47.4
9 39 11.7	9.3	40 1.74	39 45.3	54 41.25	+12.51	+0 15.80	+10.80	-0.89	- 7.60	9 40 32.78	51 27 14.9
9 43 41.3	7.0	44 31.14	44 16.0	9 25.95	+11.58	+0 15.80	+10.46	-0.91	- 7.40	9 45 2.02	51 12 28.3
9 49 25.0	9.0	50 15.04	49 57.3	6 57.75	+13.56	+0 15.80	+ 9.94	-0.98	- 7.20	9 50 45.71	51 14 57.0
9 52 26.3	7.0	53 12.91	52 57.0	17 5.75	+12.23	+0 15.80	+ 9.81	-0.99	- 7.00	9 53 43.48	51 4 47.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
9 55 50.5	7.0	56 37.28	56 22.3	12 28.15	+11.52	+0 15.80	+ 9.95	-1.02	- 6.90	9 57 7.74	51 9 23.8
9 59 48.4	7.0	0 34.35	0 17.7	55 58.45	+12.67	+0 15.80	+10.58	-1.05	- 6.80	10 1 4.72	51 25 54.6
ZONE 44, APRIL 5, 1871.											
8 7 19.1	9.5	8 12.52	8 1.6	24 13.60	+ 8.17	+0 18.45	+11.25	-0.10	-10.30	8 8 48.95	51 57 55.9
8 12 25.8	9.7	13 20.24	13 1.9	5 35.70	+13.71	+0 18.47	+10.72	-0.14	-10.40	8 13 56.63	52 16 36.8
8 15 43.4	9.0	16 36.37	16 20.0	3 23.40	+12.28	+0 18.47	+11.41	-0.17	-10.30	8 17 12.68	52 18 47.5
8 18 14.0	9.0	19 7.78	18 47.1	19 2.75	+15.58	+0 18.47	+11.19	-0.20	-10.30	8 19 43.96	52 3 10.5
8 19 35.5	9.3	20 30.04	20 15.5	46 3.45	+10.78	+0 18.47	+11.21	-0.21	-10.40	8 21 6.30	52 36 4.9
8 23 10.2	8.8	24 4.82	23 42.2	4 31.50	+16.92	+0 18.48	+11.55	-0.24	-10.20	8 24 40.94	52 17 42.2
8 24 19.8	9.2	25 16.16	24 57.7	4 46.65	+13.85	+0 18.48	+11.67	-0.25	-10.20	8 25 52.24	52 17 23.7
8 25 30.8	8.8	26 23.34	26 8.5	45 21.40	+11.00	+0 18.48	+11.07	-0.26	-10.30	8 26 59.46	52 36 45.1
8 27 1.7	7.5	27 54.15	27 37.0	54 12.25	+12.83	+0 18.48	+11.73	-0.28	-10.20	8 28 30.19	52 27 56.4
8 29 35.3	9.0	30 28.50	.....	.....	.....	+0 18.48	.....	-0.29	.....	8 31 4.44	.....
8 31 2.2	8.6	31 54.13	31 36.6	51 58.15	+13.04	+0 18.48	+11.28	-0.31	-10.20	8 32 30.07	52 30 9.2
8 42 34.7	7.0	43 24.78	43 11.3	30 41.50	+ 9.98	+0 18.49	+11.41	-0.42	-10.10	8 44 0.47	52 51 19.8
8 43 4.0	9.0	43 55.71	44 23.2	26 37.60	-20.76	+0 18.48	+10.45	-0.41	- 9.80	8 44 31.21	51 54 52.2
8 48 16.3	8.5	49 6.69	48 49.1	53 3.15	+13.12	+0 18.50	+11.50	-0.46	- 9.80	8 49 42.16	52 29 0.2
8 52 25.1	9.0	53 15.60	52 54.7	39 26.70	+15.50	+0 18.51	+12.01	-0.49	- 9.90	8 53 51.00	52 42 38.4
8 53 33.8	8.6	54 25.55	54 10.4	15 35.40	+11.43	+0 18.51	+10.60	-0.50	- 9.60	8 55 0.81	52 6 24.2
8 54 10.2	9.0	55 1.94	55 24.8	3 35.30	-17.14	+0 18.51	+11.37	-0.51	- 9.70	8 55 37.22	52 17 56.3
8 56 56.8	7.0	57 45.90	57 29.0	14 18.85	+12.70	+0 18.51	+11.41	-0.53	- 9.60	8 58 21.07	52 7 42.0
8 58 37.8	3.0	59 27.68	59 14.0	15 30.50	+10.30	+0 18.50	+10.59	-0.54	- 9.50	9 0 2.79	52 6 26.9
8 59 40.9	8.8	0 32.58	0 14.2	23 20.75	+13.88	+0 18.50	+11.03	-0.55	- 9.50	9 1 7.63	51 58 40.4
9 8 37.7	9.0	9 27.98	9 5.4	52 1.10	+16.84	+0 18.52	+11.24	-0.63	- 9.40	9 10 2.87	52 30 1.1
9 14 52.3	7.5	15 40.20	15 22.8	15 26.20	+13.16	+0 18.52	+10.53	-0.67	- 9.10	9 16 14.85	52 6 30.5
9 19 30.7	8.6	20 19.93	19 58.1	16 27.55	+16.40	+0 18.53	+10.71	-0.71	- 9.00	9 20 54.43	52 5 31.6
9 20 14.2	9.0	21 5.14	20 58.4	39 25.20	+ 4.94	+0 18.53	+12.40	-0.74	- 8.30	9 21 39.70	52 42 24.7
9 28 39.2	9.5	29 28.14	29 8.0	18 57.30	+15.10	+0 18.53	+11.44	-0.79	- 8.70	9 30 2.34	52 2 59.6
9 29 12.6	8.3	30 1.38	30 41.4	27 52.10	-29.53	+0 18.53	+11.59	-0.81	- 8.90	9 30 35.68	52 53 20.0
9 31 33.2	7.2	32 21.20	32 7.0	41 5.35	+10.54	+0 18.53	+11.34	-0.83	- 8.80	9 32 55.39	52 40 46.2
9 34 42.2	8.8	35 30.33	35 14.5	25 57.10	+11.93	+0 18.53	+10.47	-0.83	- 8.40	9 36 4.33	51 55 54.7
ZONE 45, APRIL 5, 1871.											
9 55 37.1	9.2	56 22.60	56 6.8	57 7.40	+12.06	+0 18.64	+10.20	-0.97	- 7.55	9 56 55.99	51 24 41.0
9 56 23.4	7.8	57 7.74	56 58.6	50 14.30	+ 6.93	+0 18.64	+ 9.93	-0.98	- 7.50	9 51 41.12	51 31 28.7
9 59 48.4	8.0	0 31.41	0 14.8	55 54.00	+12.67	+0 18.64	+ 9.96	-0.99	- 7.40	10 1 4.68	51 25 54.2
10 0 31.7	....	1 16.86	1 29.3	43 55.45	- 9.42	+0 18.64	+10.85	-1.01	- 7.40	10 1 50.11	51 37 31.4
10 21 10.5	....	21 52.54	21 38.2	43 46.50	+10.86	+0 18.65	+10.85	-1.14	- 6.60	10 22 25.13	51 37 58.2
10 27 58.5	9.5	28 44.10	28 17.0	3 17.05	+20.73	+0 18.66	+10.24	-1.18	- 6.20	10 29 16.44	51 18 36.4
10 34 4.4	7.3	34 44.52	34 28.6	54 35.75	+12.13	+0 18.67	+10.81	-1.22	- 6.00	10 35 16.69	51 27 9.0
10 38 25.0	9.4	39 4.83	38 41.0	5 7.25	+18.22	+0 18.67	+ 9.54	-1.24	- 5.72	10 39 36.84	51 16 42.1
10 44 33.8	....	45 14.57	45 26.5	40 34.65	- 9.03	+0 18.67	+10.17	-1.29	- 5.50	10 45 46.42	51 40 47.6
10 46 37.8	8.2	47 18.08	46 58.8	46 51.75	+14.68	+0 18.67	+10.34	-1.30	- 5.30	10 47 49.83	51 34 54.3
10 48 23.5	9.8	49 2.72	48 42.7	10 15.30	+15.34	+0 18.66	+ 9.55	-1.30	- 5.20	10 49 34.38	51 11 30.5
10 49 28.7	8.6	50 10.50	49 56.8	58 52.20	+10.47	+0 18.68	+10.62	-1.31	- 5.20	10 50 42.15	51 22 49.8
10 50 36.8	8.6	51 17.04	51 4.0	42 25.00	+ 9.87	+0 18.68	+10.57	-1.33	- 5.20	10 51 48.66	51 39 16.2
10 54 27.6	9.1	55 8.75	54 46.1	27 15.25	+17.52	+0 18.68	+ 9.67	-1.33	- 3.90	10 55 40.22	50 54 33.6
10 57 24.3	8.1	58 4.42	57 42.1	52 7.00	+16.99	+0 18.68	+10.24	-1.37	- 4.82	10 58 35.80	51 29 40.8
10 58 51.5	9.8	59 30.16	59 9.0	34 38.65	+16.05	+0 18.68	+11.13	-1.38	- 4.80	11 0 1.51	51 47 8.9

ZONE 46, APRIL 6, 1871.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
8 5 17.2	7.8	6 32.74	6 14.2	39 0.00	+13.72	-0 3.46	+11.95	-0.07	-10.60	8 6 47.48	52 43 14.1
8 7 19.1	9.5	8 34.32	8 7.4	24 22.75	+20.17	-0 3.47	+11.15	-0.07	-10.40	8 8 48.86	51 57 57.0
8 12 25.8	9.5	13 42.08	13 23.1	5 34.25	+14.23	-0 3.46	+10.72	-0.12	-10.45	8 13 56.56	52 16 37.2
8 15 43.4	8.8	16 58.19	16 41.5	3 22.45	+12.50	-0 3.45	+11.40	-0.15	-10.40	8 17 12.60	52 18 47.1
8 18 14.0	9.1	19 29.74	19 5.8	19 2.65	+17.99	-0 3.46	+11.16	-0.17	-10.30	8 19 44.02	52 3 11.5
8 19 35.5	9.4	20 51.86	20 33.8	46 3.15	+13.46	-0 3.45	+11.18	-0.18	-10.40	8 21 6.23	52 36 6.4
8 23 10.2	9.1	24 26.78	24 7.6	4 25.85	+14.38	-0 3.44	+11.57	-0.21	-10.30	8 24 41.01	52 17 43.7
8 24 19.8	9.3	25 37.88	25 18.8	4 44.35	+14.30	-0 3.44	+11.63	-0.22	-10.30	8 25 52.07	52 17 24.8
8 25 30.8	8.7	26 45.26	26 26.4	45 23.60	+14.05	-0 3.44	+11.04	-0.24	-10.40	8 26 59.48	52 36 44.3
8 27 1.7	6.8	28 15.95	27 55.0	54 13.10	+15.58	-0 3.44	+11.69	-0.25	-10.30	8 28 30.10	52 27 56.7
8 29 35.3	9.5	30 50.35	30 30.4	8 20.30	+15.00	-0 3.45	+11.23	-0.27	-10.20	8 31 4.38	52 13 47.8
8 31 2.2	8.7	32 15.87	31 54.3	51 58.85	+16.02	-0 3.44	+11.24	-0.28	-10.30	8 32 29.92	52 30 9.8
8 42 34.7	6.3	43 46.66	43 24.5	30 45.20	+16.41	-0 3.43	+11.36	-0.39	-10.20	8 44 0.46	52 51 21.0
8 43 4.0	9.5	44 17.71	44 27.8	26 47.20	- 7.55	-0 3.43	+10.67	-0.38	- 9.90	8 44 31.33	51 54 54.5
8 48 16.3	8.4	49 28.51	49 41.0	52 39.05	- 9.32	-0 3.42	+11.46	-0.43	-10.00	8 49 42.09	52 29 0.2
8 52 25.1	9.0	53 37.50	53 13.2	39 27.65	+18.02	-0 3.41	+12.00	-0.47	-10.00	8 53 51.00	52 42 38.4
8 53 33.8	8.9	54 47.21	54 30.4	15 34.95	+12.63	-0 3.42	+10.54	-0.47	- 9.80	8 55 0.57	52 6 24.2
8 54 10.2	9.2	55 23.74	55 43.5	3 35.60	-14.82	-0 3.41	+11.36	-0.48	- 9.80	8 55 37.13	52 17 56.7
8 56 56.8	6.8	58 7.80	57 46.5	14 19.45	+16.01	-0 3.42	+11.33	-0.50	- 9.70	8 58 21.07	52 7 43.1
8 58 37.8	...	59 49.44	59 32.8	15 33.05	+12.48	-0 3.42	+10.54	-0.52	- 9.60	9 0 2.65	52 6 24.9
8 59 40.9	9.1	0 54.40	0 41.6	23 14.70	+ 9.65	-0 3.42	+11.00	-0.52	- 9.60	9 1 7.56	51 58 40.6
9 8 37.7	9.2	9 49.76	9 28.0	51 57.45	+16.24	-0 3.40	+11.21	-0.60	- 9.50	9 10 2.76	52 30 2.6
9 11 12.2	9.4	12 24.59	11 56.7	53 19.40	+20.80	-0 3.40	+11.41	-0.62	- 9.50	9 12 37.51	52 28 44.8
9 14 52.3	6.2	16 2.02	15 38.8	15 28.45	+17.44	-0 3.40	+10.46	-0.65	- 9.30	9 16 14.77	52 6 30.8
9 19 30.7	8.7	20 41.75	20 15.0	16 29.40	+20.16	-0 3.40	+10.61	-0.69	- 9.10	9 20 54.34	52 5 31.8
9 28 39.2	9.8	29 50.00	29 34.2	18 53.15	+11.89	-0 3.39	+11.20	-0.76	- 8.80	9 30 2.31	52 2 58.7
9 29 12.6	8.6	30 23.18	30 44.0	28 5.35	-15.36	-0 3.38	+11.88	-0.78	- 9.00	9 30 35.60	51 53 19.6
9 31 33.2	8.1	32 43.06	32 23.4	41 6.65	+14.62	-0 3.38	+11.25	-0.80	- 8.90	9 32 55.37	52 40 47.3
9 34 42.2	8.5	35 52.21	35 31.9	25 58.25	+15.33	-0 3.38	+10.40	-0.80	- 8.60	9 36 4.33	51 55 55.2

ZONE 47, APRIL 6, 1871.

10 3 35.3	7.5	4 41.76	4 26.7	16 9.85	+11.35	-0 3.47	+10.64	-1.02	- 7.60	10 4 52.87	52 5 36.0
10 4 36.3	9.3	5 45.13	5 37.4	26 6.40	+ 5.81	-0 3.47	+10.48	-1.03	- 7.50	10 5 56.18	51 55 33.6
10 6 21.4	9.2	7 28.96	7 12.3	38 36.95	+12.38	-0 3.46	+11.82	-1.06	- 7.65	10 7 40.04	52 43 10.7
10 8 49.8	8.0	9 56.33	9 43.4	55 50.05	+ 9.63	-0 3.46	+10.94	-1.07	- 7.50	10 10 7.30	52 25 53.6
10 9 45.9	6.5	10 50.92	10 40.7	19 54.90	+ 7.68	-0 3.47	+11.41	-1.07	- 7.40	10 11 1.81	52 1 47.2
10 12 59.0	8.0	14 4.67	13 51.0	18 29.65	+10.31	-0 3.47	+11.12	-1.09	- 7.20	10 14 15.46	52 3 14.5
10 14 50.5	9.2	15 57.01	15 46.0	48 45.95	+ 8.19	-0 3.46	+11.74	-1.12	- 7.30	10 16 7.78	52 32 56.3
10 16 9.6	9.3	17 14.84	16 59.4	33 21.60	+11.40	-0 3.45	+11.90	-1.13	- 7.25	10 17 25.60	52 48 23.9
10 29 32.6	9.5	30 37.47	30 18.2	16 43.40	+14.52	-0 3.45	+10.71	-1.20	- 6.50	10 30 47.72	52 5 2.9
10 32 57.0	9.2	34 4.36	34 31.1	4 4.70	-19.99	-0 3.44	+11.36	-1.23	- 6.40	10 34 14.51	52 17 7.3
10 37 58.0	9.0	39 0.84	38 42.0	55 19.20	+14.03	-0 3.43	+10.78	-1.26	- 6.20	10 39 10.85	52 26 25.9
10 39 9.0	9.0	40 12.35	39 57.2	53 58.45	+11.33	-0 3.43	+11.66	-1.27	- 6.20	10 40 22.31	52 27 44.7
10 45 34.0	9.0	46 39.12	46 17.5	22 2.20	+16.28	-0 3.43	+10.64	-1.30	- 5.80	10 46 48.83	51 59 43.2
10 46 20.1	7.8	47 23.35	47 14.7	34 24.95	+ 6.44	-0 3.42	+12.14	-1.33	- 5.90	10 47 33.08	52 47 13.2
10 48 7.0	8.0	49 11.09	48 58.2	30 41.75	+ 9.54	-0 3.42	+11.36	-1.34	- 5.80	10 49 20.76	52 50 58.6
10 49 22.0	7.0	50 25.32	50 12.0	14 7.70	+ 9.99	-0 3.43	+11.30	-1.32	- 5.60	10 50 34.91	52 7 33.2
10 50 42.0	6.0	51 44.69	51 30.5	48 37.10	+10.57	-0 3.42	+11.65	-1.35	- 5.60	10 51 54.26	52 33 4.6
10 51 52.6	6.5	52 54.53	52 45.2	11 16.25	+ 6.98	-0 3.43	+10.77	-1.34	- 5.50	10 53 4.03	52 10 20.9
10 52 56.2	9.2	53 59.75	53 43.9	30 24.55	+11.75	-0 3.42	+11.25	-1.37	- 5.60	10 54 9.25	52 51 17.7

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
10 58 36.6	7.8	59 36.12	0 2.0	24 47.45	-19.54	-0 3.42	+11.14	-1.37	- 5.10	10 59 45.40	51 56 23.3
11 0 54.6	7.5	1 53.82	1 36.1	18 23.60	+13.32	-0 3.42	+11.04	-1.39	- 5.00	11 2 3.02	52 3 19.8
11 3 28.8	8.3	4 28.81	4 14.3	34 58.90	+10.73	-0 3.41	+11.10	-1.43	- 5.00	11 4 37.95	52 46 41.8
ZONE 48, APRIL 8, 1871.											
9 28 38.9	....	29 23.92	29 6.0	56 7.15	+13.96	+0 21.33	+ 8.53	-0.68	- 8.60	9 30 0.80	50 25 43.0
9 34 43.4	9.0	35 27.73	35 9.2	21 59.00	+14.56	+0 21.34	+ 8.23	-0.72	- 8.40	9 36 4.38	49 59 50.4
9 43 41.3	7.5	44 25.58	44 7.6	9 16.50	+13.77	+0 21.34	+10.00	-0.81	- 8.40	9 45 2.10	51 12 32.1*
9 49 25.0	9.5	50 9.46	49 53.0	6 50.25	+12.64	+0 21.35	+ 9.55	-0.86	- 8.30	9 50 45.80	51 14 55.7
9 52 26.3	7.7	53 7.11	52 54.2	16 55.45	+ 9.92	+0 21.35	+ 9.42	-0.88	- 8.10	9 53 43.34	51 4 47.3
9 55 50.5	7.0	56 31.64	56 19.0	12 16.80	+ 9.67	+0 21.35	+ 9.57	-0.90	- 8.00	9 57 7.77	51 9 25.4
9 59 48.4	....	0 28.53	0 13.8	55 46.90	+11.22	+0 21.35	+ 9.54	-0.94	- 7.90	10 1 4.56	51 25 56.2
ZONE 49, APRIL 17, 1871.											
9 9 3.1	8.0	10 15.49	9 56.8	12 34.20	+14.04	-0 4.17	+10.90	-0.33	-10.80	9 10 27.92	52 9 21.3
9 11 12.2	9.4	12 25.09	12 1.6	53 13.20	+17.52	-0 4.17	+11.33	-0.36	-10.80	9 12 37.50	52 28 45.7
9 15 14.3	9.0	16 26.42	16 8.6	5 45.85	+13.33	-0 4.16	+10.67	-0.39	-10.70	9 16 38.68	52 16 7.4
9 20 14.2	8.8	21 27.40	21 8.1	39 30.20	+14.32	-0 4.16	+11.88	-0.44	-10.70	9 21 39.57	52 42 24.2
9 28 39.2	10.0	29 50.36	30 36.0	18 6.10	-34.31	-0 4.15	+10.44	-0.50	-10.40	9 30 2.17	52 2 56.6
9 30 10.6	9.0	31 20.19	31 3.8	16 33.30	+10.50	-0 4.15	+10.66	-0.52	-10.30	9 31 31.96	52 5 14.2
9 30 57.3	9.2	32 8.06	32 31.2	26 24.70	-17.44	-0 4.15	+10.36	-0.52	-10.30	9 32 19.78	51 54 54.4
9 34 51.7	8.8	36 0.98	36 7.0	25 4.65	-27.16	-0 4.14	+ 9.95	-0.56	-10.10	9 36 12.58	51 56 3.8
9 35 53.3	9.0	37 3.69	37 35.7	52 18.00	-23.85	-0 4.14	+11.02	-0.57	-10.30	9 37 15.34	52 28 54.4
9 45 55.8	9.5	47 5.36	46 39.7	18 29.15	+19.34	-0 4.13	+10.89	-0.65	-10.00	9 47 16.63	52 3 24.6
9 48 35.6	8.8	49 44.85	49 20.5	40 9.15	+18.02	-0 4.13	+10.95	-0.68	-10.10	9 49 56.11	52 41 42.7
9 51 27.8	8.4	52 36.44	52 15.0	50 22.95	+15.94	-0 4.14	+10.82	-0.70	- 9.90	9 52 47.57	52 31 26.4
9 52 24.9	8.4	53 34.64	53 17.4	56 9.05	+12.84	-0 4.13	+10.90	-0.71	- 9.90	9 53 45.73	52 25 37.1
9 53 7.4	8.8	54 17.50	54 42.8	41 31.40	-18.78	-0 4.13	+11.14	-0.72	- 9.90	9 54 28.59	52 39 43.2
ZONE 50, APRIL 17, 1871.											
9 57 33.3	8.8	58 41.07	58 22.6	35 57.50	+13.55	-0 4.03	+11.23	-0.76	- 9.85	9 58 52.12	52 45 49.4
10 9 45.9	7.0	10 51.18	10 37.8	19 54.45	+10.09	-0 4.02	+11.26	-0.85	- 9.30	10 11 1.74	52 1 47.5
10 12 59.0	8.7	14 5.01	13 44.3	18 31.70	+15.58	-0 4.02	+10.93	-0.87	- 9.20	10 14 15.47	52 3 15.0
10 14 50.5	9.0	15 57.43	15 34.4	48 51.55	+17.12	-0 4.02	+11.56	-0.90	- 9.25	10 16 7.86	52 32 57.0
10 16 9.6	9.5	17 15.14	16 57.3	33 21.45	+13.17	-0 4.02	+11.78	-0.91	- 9.25	10 17 25.55	52 48 23.1
10 29 32.6	9.8	30 37.75	30 13.8	16 42.35	+18.05	-0 4.01	+10.60	-1.00	- 8.60	10 30 47.63	52 5 4.7
10 32 57.0	9.5	34 4.78	33 32.0	4 46.60	+24.56	-0 4.01	+11.29	-1.03	- 8.50	10 34 14.56	52 17 7.3
10 37 58.0	9.0	39 1.38	38 36.2	55 21.55	+18.81	-0 4.00	+10.67	-1.08	- 8.40	10 39 11.00	52 26 25.5
10 39 9.0	9.3	40 12.81	39 52.4	53 59.00	+15.21	-0 4.00	+11.50	-1.09	- 8.35	10 40 22.38	52 27 45.2
10 43 57.0	6.8	45 0.13	44 45.8	37 35.50	+10.60	-0 4.00	+11.57	-1.13	- 8.20	10 45 9.54	52 44 3.7
10 45 34.0	9.3	46 39.54	46 11.9	22 2.60	+20.80	-0 4.00	+10.50	-1.12	- 8.00	10 46 48.86	51 59 44.4
10 46 20.1	8.4	47 23.67	47 37.9	34 6.90	-10.54	-0 4.00	+11.93	-1.14	- 8.10	10 47 33.01	52 47 11.4
10 48 7.0	8.2	49 11.51	49 24.1	30 20.15	- 9.31	-0 4.00	+11.24	-1.16	- 8.10	10 49 20.78	52 50 58.4
10 49 22.0	7.5	50 25.64	50 13.4	14 5.35	+ 9.17	-0 3.99	+11.22	-1.15	- 7.80	10 50 34.84	52 7 31.9
10 50 42.0	5.5	51 45.11	51 23.6	48 41.35	+16.00	-0 3.99	+11.52	-1.17	- 7.90	10 51 54.29	52 33 2.8
10 51 52.6	6.0	52 54.85	52 40.7	11 17.65	+10.59	-0 3.99	+10.71	-1.17	- 7.70	10 53 3.96	52 10 20.4
10 52 56.2	9.0	54 0.13	53 44.2	30 22.60	+11.75	-0 3.99	+11.23	-1.20	- 7.85	10 54 9.23	52 51 16.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	" "	m s	" "	s "	" "	h m s	° ' "
10 57 22.2	8.9	58 24.30	57 59.4	50 0.90	+18.54	-0 3.99	+10.70	-1.22	- 7.55	10 58 33.23	52 31 44.8
10 58 36.6	8.1	59 36.60	59 21.3	25 15.75	+11.54	-0 3.99	+10.25	-1.21	- 7.40	10 59 45.47	51 56 22.4
11 0 54.6	6.5	1 54.18	1 33.1	18 23.20	+15.88	-0 3.99	+10.93	-1.23	- 7.30	11 2 2.97	52 3 19.8
11 3 28.8	8.4	4 29.23	4 8.7	35 0.55	+15.18	-0 3.98	+11.04	-1.27	- 7.40	11 4 37.96	52 46 41.6
ZONE 51, APRIL 18, 1871.											
9 9 3.1	8.0	10 14.25	9 53.2	12 34.95	+15.85	-0 2.93	+10.93	-0.31	-10.90	9 10 27.94	52 9 23.0
9 11 12.2	9.2	12 23.87	12 9.2	53 5.85	+10.96	-0 2.93	+10.44	-0.33	-10.90	9 12 37.55	52 28 46.2
9 15 14.3	8.7	16 25.40	15 57.7	5 54.45	+20.75	-0 2.93	+10.64	-0.36	-10.80	9 16 38.92	52 16 6.8
9 20 14.2	9.0	21 26.36	21 2.0	39 31.90	+18.10	-0 2.93	+11.87	-0.41	-10.80	9 21 39.79	52 42 26.8
9 30 10.6	9.3	31 19.01	30 56.7	16 38.40	+16.77	-0 2.92	+10.65	-0.49	-10.50	9 31 32.04	52 5 15.9
9 30 57.3	9.0	32 6.90	32 33.0	26 22.95	-19.70	-0 2.92	+10.36	-0.50	-10.40	9 32 19.87	51 54 54.5
9 34 51.7	8.8	35 59.72	36 31.0	25 10.60	-23.61	-0 2.92	+10.09	-0.53	-10.20	9 36 12.57	51 56 2.1
10 3 35.3	8.0	4 41.00	4 23.1	16 10.25	+13.46	-0 2.90	+10.61	-0.78	- 9.60	10 4 52.92	52 5 35.2
10 4 36.3	9.5	5 44.49	5 32.3	26 7.35	+ 9.21	-0 2.90	+10.46	-0.78	- 9.50	10 5 56.36	51 55 33.6
10 6 21.4	9.3	7 28.30	7 8.2	38 37.75	+14.90	-0 2.90	+11.75	-0.81	- 9.70	10 7 40.19	52 43 9.9
10 8 49.8	8.6	9 55.67	9 37.2	55 52.73	+13.80	-0 2.90	+10.91	-0.83	- 9.60	10 10 7.44	52 25 52.5
10 16 9.6	8.9	17 14.08	16 49.7	33 27.10	+18.06	-0 2.89	+11.76	-0.89	- 9.40	10 17 25.64	52 48 22.3
10 18 37.1	9.5	19 42.44	19 20.3	45 50.85	+16.43	-0 2.89	+11.04	-0.90	- 9.30	10 19 53.90	52 35 55.9
10 21 0.3	8.5	22 4.90	21 44.1	27 56.95	+15.36	-0 2.89	+11.79	-0.93	- 9.30	10 22 16.30	52 53 49.2
10 22 1.7	8.3	23 5.82	22 48.2	54 50.85	+13.13	-0 2.89	+11.72	-0.93	- 9.20	10 23 17.14	52 26 52.9
10 23 35.0	8.8	24 38.99	24 17.6	52 29.45	+15.95	-0 2.89	+11.26	-0.94	- 9.10	10 24 50.26	52 29 16.6
10 25 42.0	8.9	26 46.73	26 23.3	33 38.05	+17.28	-0 2.89	+11.81	-0.97	- 9.10	10 26 57.94	52 48 9.6
10 41 28.0	8.6	42 30.47	.....	.....	.....	-0 2.87	.....	-1.06	.....	10 42 41.09	.....
10 42 46.0	9.5	43 53.30	43 39.0	42 13.75	+10.62	-0 2.87	+11.45	-1.10	- 8.50	10 44 3.90	52 39 25.3
10 43 57.0	7.8	44 59.09	44 42.7	37 36.95	+12.15	-0 2.87	+11.60	-1.11	- 8.40	10 45 9.65	52 44 3.7
10 45 34.0	8.8	46 38.50	46 20.2	21 55.25	+13.79	-0 2.87	+10.65	-1.10	- 8.20	10 46 48.97	51 59 44.8
10 48 7.0	7.0	49 10.37	48 52.3	30 42.10	+13.38	-0 2.87	+11.34	-1.14	- 8.30	10 49 20.79	52 50 59.2
10 49 22.0	7.0	50 24.54	50 9.4	14 7.20	+11.34	-0 2.87	+11.25	-1.13	- 8.00	10 50 34.88	52 7 32.1
10 50 42.0	6.5	51 43.99	51 29.0	48 35.25	+11.16	-0 2.87	+11.61	-1.15	- 8.10	10 51 54.31	52 33 4.0
10 51 55.9	8.8	52 59.59	52 39.1	15 51.30	+15.41	-0 2.87	+10.53	-1.14	- 7.90	10 53 9.85	52 5 51.2
10 52 56.2	9.0	53 59.03	53 46.3	30 19.60	+ 9.39	-0 2.87	+11.29	-1.17	- 8.10	10 54 9.28	52 51 17.4
10 57 58.7	9.2	58 58.24	58 34.4	18 57.50	+17.91	-0 2.87	+11.05	-1.19	- 7.70	10 59 8.27	52 2 47.8
10 58 36.6	8.0	59 35.44	59 53.9	24 51.40	-13.96	-0 2.87	+11.17	-1.19	- 7.60	10 59 45.45	51 56 22.1
ZONE 52, APRIL 18, 1871.											
11 23 2.4	8.8	23 59.55	23 38.3	20 50.55	+16.04	-0 2.90	+10.42	-1.35	- 6.50	11 24 8.66	52 0 51.9
11 24 55.8	8.6	25 53.80	25 34.1	55 8.95	+14.70	-0 2.90	+10.74	-1.38	- 6.50	11 26 2.84	52 26 32.4
11 26 9.9	9.8	27 6.52	26 49.4	59 21.25	+12.78	-0 2.90	+11.54	-1.39	- 6.40	11 27 15.51	52 22 19.0
11 26 40.3	8.3	27 37.82	27 55.7	55 38.15	-13.36	-0 2.90	+10.84	-1.39	- 6.40	11 27 46.79	52 25 35.2
11 29 23.9	8.8	30 21.35	29 57.3	2 35.10	+17.96	-0 2.89	+11.08	-1.40	- 6.30	11 30 30.24	52 19 9.8
11 31 31.8	8.0	32 28.80	32 9.1	28 57.85	+14.55	-0 2.89	+12.00	-1.44	- 6.30	11 32 37.60	52 52 44.5
11 33 41.9	8.3	34 38.47	34 15.5	41 14.75	+17.07	-0 2.89	+11.18	-1.44	- 6.10	11 34 47.20	52 40 29.4
11 35 13.4	8.4	36 10.27	35 51.8	44 30.75	+13.75	-0 2.89	+11.84	-1.45	- 6.00	11 36 18.94	52 37 10.8
11 36 4.4	8.8	36 59.76	36 47.0	42 20.85	+ 9.50	-0 2.89	+11.47	-1.45	- 6.00	11 37 8.41	52 39 16.1
11 38 40.8	7.5	39 36.51	39 19.8	44 4.10	+12.41	-0 2.89	+11.76	-1.47	- 5.90	11 39 45.06	52 37 36.0
11 43 11.9	7.3	44 6.84	43 45.8	15 15.10	+15.78	-0 2.88	+10.40	-1.47	- 5.50	11 44 15.25	52 6 27.3
11 44 6.3	8.8	45 2.44	44 42.4	40 28.95	+14.84	-0 2.88	+11.09	-1.50	- 5.60	11 45 10.80	52 41 13.1
11 52 22.7	8.6	53 16.50	52 59.8	3 3.25	+12.50	-0 2.87	+11.23	-1.53	- 5.10	11 53 24.59	52 18 36.9
12 1 0.3	8.3	1 53.94	1 30.0	23 44.90	+18.02	-0 2.86	+10.93	-1.57	- 4.60	12 2 1.74	51 58 1.0

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R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
12 2 45.5	8.4	3 38.95	3 20.2	21 17.85	+14.09	-0 2.86	+10.51	-1.58	- 4.50	12 3 46.69	52 0 23.8
12 3 34.4	7.0	4 26.64	4 15.5	52 4.50	+ 8.27	-0 2.86	+11.27	-1.60	- 4.50	12 4 34.33	52 29 32.1
12 5 30.5	7.5	6 23.30	6 1.8	43 36.25	+15.97	-0 2.86	+11.64	-1.61	- 4.50	12 6 30.92	52 38 8.4
ZONE 53, APRIL 23, 1871.											
9 43 41.3	7.0	44 43.74	44 26.8	9 17.35	+12.96	+0 2.82	+10.18	-0.47	-10.60	9 45 2.08	51 12 27.8
ZONE 54, APRIL 24, 1871.											
9 34 51.7	8.4	35 53.72	35 40.8	24 50.20	+ 9.73	+0 3.01	+11.15	-0.40	-10.70	9 36 12.63	51 56 3.4
9 51 27.8	8.4	52 29.14	52 10.0	50 21.25	+14.23	+0 3.01	+10.89	-0.54	-10.50	9 52 47.58	52 31 26.6
9 52 24.9	8.5	53 27.30	53 13.9	56 5.65	+10.00	+0 3.01	+10.97	-0.55	-10.50	9 53 45.69	52 25 37.9
9 53 7.4	9.0	54 10.20	54 17.6	41 44.45	- 5.49	+0 3.01	+11.37	-0.56	-10.50	9 54 28.59	52 39 43.9
9 55 25.8	....	56 27.46	56 6.4	14 21.90	+15.86	+0 3.01	+11.20	-0.57	-10.70	9 56 45.72	52 7 27.0
9 57 42.7	9.5	58 46.10	58 23.1	18 3.60	+17.31	+0 3.01	+10.86	-0.59	-10.60	9 59 4.27	52 3 46.1
10 3 35.3	7.5	4 34.84	4 11.7	16 13.75	+17.37	+0 3.01	+10.54	-0.64	-10.50	10 4 52.81	52 5 34.7
10 4 36.3	9.5	5 38.25	5 24.1	26 5.00	+10.72	+0 3.01	+10.43	-0.64	-10.40	10 5 56.17	51 55 36.7
10 6 21.4	9.3	7 22.14	7 0.6	38 37.65	+15.94	+0 3.01	+11.68	-0.67	-10.60	10 7 40.08	52 43 10.2
10 8 49.8	7.5	9 49.53	9 26.8	55 54.15	+16.86	+0 3.01	+10.85	-0.69	-10.50	10 10 7.35	52 25 53.3
10 29 32.6	9.3	30 30.69	30 9.5	16 38.95	+15.95	+0 3.00	+10.65	-0.86	- 9.80	10 30 47.73	52 5 5.1
10 41 28.0	8.4	42 24.45	42 3.7	26 32.50	+15.70	+0 3.00	+10.43	-0.94	- 9.30	10 42 41.06	51 55 10.1
10 42 46.0	9.3	43 47.26	43 25.8	42 16.45	+15.96	+0 3.00	+11.37	-0.98	- 9.50	10 44 3.85	52 39 27.0
10 43 57.0	6.3	44 52.97	44 35.2	37 36.90	+13.19	+0 3.00	+11.55	-0.99	- 9.50	10 45 9.52	52 44 3.8
10 45 34.0	9.0	46 32.40	46 10.5	21 57.05	+16.50	+0 3.00	+10.60	-0.98	- 9.20	10 46 48.86	51 59 44.8
10 48 7.0	8.0	49 4.37	48 41.4	30 44.90	+17.00	+0 3.00	+11.26	-1.02	- 9.40	10 49 20.78	52 50 58.9
10 49 22.0	7.2	50 18.58	50 4.5	14 4.65	+10.59	+0 3.00	+11.21	-1.01	- 9.10	10 50 34.91	52 7 32.9
10 50 42.0	6.0	51 37.95	51 20.0	48 35.90	+13.32	+0 3.00	+11.54	-1.04	- 9.20	10 51 54.25	52 33 4.5
10 51 55.9	9.0	52 53.51	52 33.1	15 49.45	+15.34	+0 3.00	+10.51	-1.03	- 9.00	10 53 9.75	52 5 52.0
10 52 56.2	9.0	53 53.05	53 38.7	30 20.50	+10.57	+0 3.00	+11.28	-1.06	- 9.20	10 54 9.28	52 51 16.6
10 57 58.7	8.6	58 52.24	58 31.7	18 53.80	+15.43	+0 3.00	+11.03	-1.08	- 8.80	10 59 8.25	52 2 48.0
10 58 36.6	....	59 29.32	59 45.8	24 51.35	-12.45	+0 3.00	+11.15	-1.08	- 8.70	10 59 45.31	51 56 22.6
11 23 2.4	9.0	23 53.67	23 43.0	20 39.45	+ 8.06	+0 2.99	+10.47	-1.26	- 7.70	11 24 8.76	52 0 53.5
11 24 55.8	8.5	25 47.84	25 29.1	55 6.85	+13.95	+0 2.99	+10.74	-1.29	- 7.80	11 26 2.86	52 26 32.1
11 26 9.9	9.3	27 0.74	27 18.4	58 54.80	-13.23	+0 2.99	+11.40	-1.29	- 7.70	11 27 15.72	52 22 17.7
11 26 40.3	8.4	27 31.86	27 48.5	55 36.00	-12.39	+0 2.99	+10.83	-1.29	- 7.70	11 27 46.82	52 25 36.7
11 29 23.9	9.0	30 15.39	29 48.8	2 34.20	+19.90	+0 2.99	+10.99	-1.31	- 7.50	11 30 30.25	52 19 11.0
11 38 40.8	7.2	39 30.53	39 8.3	44 5.80	+16.49	+0 2.99	+11.66	-1.38	- 7.20	11 39 45.05	52 37 36.6
11 43 11.9	....	44 0.92	43 36.9	15 14.60	+18.04	+0 2.99	+10.38	-1.39	- 6.80	11 44 15.28	52 6 28.4
11 44 6.3	8.4	44 56.60	44 45.3	40 21.75	+ 8.38	+0 2.99	+11.14	-1.42	- 6.90	11 45 10.91	52 41 12.2
12 1 0.3	8.4	1 48.06	1 27.2	23 39.25	+15.76	+0 2.99	+10.91	-1.50	- 5.90	12 2 1.78	51 58 2.7
12 2 45.5	8.2	3 32.95	3 9.9	21 17.60	+17.40	+0 2.99	+10.45	-1.51	- 5.80	12 3 46.61	52 0 25.7
12 3 34.4	8.1	4 20.80	4 14.2	51 58.15	+ 4.92	+0 2.99	+11.23	-1.53	- 5.90	12 4 34.41	52 29 33.3
12 5 30.5	7.8	6 17.22	5 55.4	43 32.75	+16.16	+0 2.99	+11.56	-1.54	- 5.80	12 6 30.76	52 38 10.4
ZONE 55, APRIL 26, 1871.											
10 21 10.5	7.3	22 7.52	21 57.3	43 36.50	+ 7.75	+0 3.24	+10.63	-0.74	-10.00	10 22 25.10	51 37 59.1
10 27 58.5	9.5	28 58.97	29 54.6	2 3.65	-42.52	+0 3.24	+10.03	-0.78	- 9.90	10 29 16.30	51 18 40.2
10 34 4.4	7.0	34 59.52	34 38.0	54 32.20	+16.40	+0 3.24	+10.49	-0.82	- 9.70	10 35 16.66	51 27 10.4

R. A. 1855.0 According to B. D.			Obs. Magn.	Mean of R. A. Wires.		Mean of Dec. Wires.		Mean of Circle Readings.		Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.					
							R. A.	Dec.	R. A.		Dec.										
h	m	s		m	s	m	s	'	"	"	m	s	"	s	"	h	m	s	°	'	"
10	40	7.6	8.5	41	3.95	40	42.0	5	31.65	+16.77	+0	3.24	+ 9.54	-0.88	- 9.50	10	41	20.85	51	16	9.9
10	41	32.9	10.0	42	29.38	42	11.3	21	53.45	+13.94	+0	3.24	+ 9.55	-0.88	- 9.40	10	42	46.22	50	59	45.2
10	42	42.5	8.8	43	41.77	43	28.5	44	20.50	+10.11	+0	3.24	+10.73	-0.91	- 9.50	10	43	58.59	51	37	15.2
10	43	32.4	6.0	44	26.89	44	44.6	25	20.35	-13.65	+0	3.24	+ 9.20	-0.90	- 9.30	10	44	43.65	50	55	50.2
10	44	33.8	8.0	45	29.57	45	52.2	40	17.00	-17.15	+0	3.24	+ 9.99	-0.92	- 9.50	10	45	46.33	51	40	50.5
10	46	37.8	8.6	47	33.04	47	14.6	46	45.10	+13.99	+0	3.24	+10.20	-0.94	- 9.40	10	47	49.72	51	34	53.6
10	48	23.5	9.0	49	17.83	48	58.5	10	5.85	+14.80	+0	3.24	+ 9.43	-0.94	- 9.20	10	49	34.43	51	11	32.9
10	49	28.7	8.6	50	25.50	50	11.4	58	45.55	+10.77	+0	3.24	+10.39	-0.96	- 9.30	10	50	42.06	51	22	50.0
10	50	36.8	9.0	51	32.10	51	18.9	42	18.50	+10.02	+0	3.24	+10.40	-0.97	- 9.20	10	51	48.64	51	39	16.3
10	54	27.6	9.2	55	23.98	55	7.9	27	4.85	+12.42	+0	3.24	+ 9.53	-0.98	- 9.00	10	55	40.36	50	54	31.2
10	58	51.5	9.3	59	45.12	59	26.5	34	29.35	+14.08	+0	3.24	+10.90	-1.03	- 9.10	11	0	1.38	51	47	9.3
11	1	54.0	....	2	47.83	2	18.0	42	51.25	-22.94	+0	3.24	+10.29	-1.06	- 8.90	11	3	3.96	51	38	9.7
11	4	46.4	9.0	5	39.04	5	15.8	2	8.80	+17.74	+0	3.24	+ 9.89	-1.07	- 8.60	11	5	55.06	51	19	32.5
11	7	43.4	8.8	8	36.08	8	9.3	2	26.50	+20.50	+0	3.24	+ 9.89	-1.09	- 8.50	11	8	52.00	51	19	17.4
11	8	59.3	8.0	9	52.43	9	34.4	30	56.15	+13.61	+0	3.24	+10.33	-1.11	- 8.70	11	10	8.32	51	50	41.0
11	13	49.9	8.4	14	40.62	15	11.8	58	36.45	-23.83	+0	3.25	+10.10	-1.14	- 8.30	11	14	56.33	51	22	23.1
11	17	10.8	8.0	18	1.49	17	44.0	10	34.30	+13.43	+0	3.25	+ 9.53	-1.16	- 8.20	11	18	17.08	51	11	1.8
11	18	7.1	9.5	18	59.15	18	45.0	18	4.50	+10.92	+0	3.25	+ 9.88	-1.16	- 8.10	11	19	14.70	51	3	29.5
11	21	0.1	9.7	21	52.10	21	32.9	56	38.20	+14.66	+0	3.25	+ 9.93	-1.19	- 8.10	11	22	7.55	51	24	59.4
11	21	40.8	8.8	22	30.90	22	59.8	27	35.70	-22.31	+0	3.25	+ 9.44	-1.18	- 8.10	11	22	46.33	50	53	24.4
11	29	15.4	7.5	30	4.83	30	22.8	30	20.50	-13.61	+0	3.25	+10.22	-1.26	- 7.80	11	30	19.99	51	50	49.0
11	35	29.8	9.0	36	21.58	35	59.0	3	28.80	+17.30	+0	3.25	+10.12	-1.29	- 7.40	11	36	36.51	51	18	11.6
11	36	33.5	9.2	37	24.70	37	6.9	34	20.30	+13.48	+0	3.25	+10.88	-1.31	- 7.50	11	37	39.59	51	47	16.9
11	37	9.8	9.3	38	49.51	38	29.9	50	53.40	+14.93	+0	3.25	+ 9.95	-1.31	- 7.40	11	39	4.35	51	30	44.4
11	38	46.0	9.0	39	35.30	39	28.0	4	17.60	+ 5.59	+0	3.25	+10.36	-1.31	- 7.30	11	39	50.12	51	17	11.4
11	39	31.9	8.8	40	18.26	40	45.5	52	11.10	-20.73	+0	3.25	+10.06	-1.32	- 7.30	11	40	33.05	51	28	51.2
11	44	18.8	8.9	45	6.73	44	43.5	25	28.05	+17.90	+0	3.25	+ 9.19	-1.33	- 7.00	11	45	21.36	50	56	12.2

ZONE 56, APRIL 29, 1871.

10	40	7.6	....	41	3.69	41	21.3	5	2.30	-13.48	+0	3.30	+ 9.25	-0.82	-10.00	10	41	20.71	51	16	8.5
10	41	32.9	9.5	42	29.18	42	9.2	21	52.50	+15.25	+0	3.30	+ 9.26	-0.82	- 9.90	10	42	46.14	50	59	47.0
10	42	42.5	9.0	43	41.47	43	24.3	44	22.45	+13.07	+0	3.29	+10.42	-0.84	-10.00	10	43	58.41	51	37	15.8
10	43	32.4	7.0	44	26.69	44	37.0	25	25.55	- 7.94	+0	3.30	+ 9.02	-0.84	- 9.80	10	44	43.57	50	55	50.4
10	44	33.8	8.8	45	29.47	45	17.3	40	44.25	+ 9.26	+0	3.30	+ 9.88	-0.86	-10.00	10	45	46.35	51	40	49.4
10	46	37.8	8.2	47	33.00	47	17.4	46	41.25	+11.86	+0	3.30	+ 9.92	-0.88	- 9.90	10	47	49.80	51	34	54.9
10	48	23.5	9.5	49	17.77	48	58.3	10	8.85	+14.96	+0	3.31	+ 9.19	-0.88	- 9.70	10	49	34.50	51	11	29.7
10	49	28.7	8.5	50	25.30	50	48.0	58	17.05	-17.34	+0	3.30	+ 9.92	-0.89	- 9.80	10	50	41.99	51	22	49.7
10	54	27.6	9.2	55	23.58	55	3.6	27	6.45	+15.43	+0	3.32	+ 9.21	-0.92	- 9.40	10	55	40.10	50	54	32.3
10	58	51.5	9.2	59	45.06	59	33.0	34	23.70	+ 9.16	+0	3.31	+10.62	-0.98	- 9.60	11	0	1.44	51	47	9.6
11	1	54.0	9.5	2	47.65	2	20.4	43	36.15	+20.66	+0	3.31	+10.17	-1.00	- 9.40	11	3	3.91	51	38	8.1
11	4	46.4	9.0	5	38.72	5	15.9	2	9.25	+17.44	+0	3.32	+ 9.62	-1.01	- 9.20	11	5	54.88	51	19	31.2
11	5	21.6	8.5	6	14.44	.....	.....	.....	.....	.....	+0	3.32	.....	-1.03	.....	11	6	30.60	.....	.....	.....
11	7	43.4	8.8	8	35.82	8	14.3	2	21.00	+16.45	+0	3.33	+ 9.68	-1.03	- 9.10	11	8	51.89	51	19	18.4
11	8	57.3	9.0	9	52.25	9	35.1	30	54.80	+13.00	+0	3.32	+10.06	-1.05	- 9.30	11	10	8.28	51	50	41.2
11	13	49.9	9.0	14	40.42	14	17.7	59	16.45	+17.34	+0	3.33	+10.08	-1.08	- 8.90	11	14	56.27	51	22	23.9
11	17	10.8	8.7	18	1.21	17	40.0	10	35.20	+16.27	+0	3.33	+ 9.23	-1.10	- 8.70	11	18	16.94	51	11	3.3
11	18	7.1	9.0	18	59.03	19	32.6	17	24.05	-25.85	+0	3.33	+ 9.22	-1.10	- 8.60	11	19	14.72	51	3	32.3
11	21	0.1	9.6	21	52.06	21	31.6	56	40.55	+15.65	+0	3.32	+ 9.66	-1.14	- 8.60	11	22	7.63	51	24	57.6
11	21	40.8	....	22	30.73	23	18.2	27	17.70	-36.67	+0	3.34	+ 8.80	-1.13	- 8.50	11	22	46.30	50	53	27.3
11	29	15.4	7.0	30	4.77	29	38.7	30	52.30	+19.73	+0	3.33	+ 9.96	-1.21	- 8.40	11	30	20.06	51	50	50.0
11	35	29.8	8.8	36	21.44	36	3.9	3	24.10	+13.39	+0	3.35	+ 9.86	-1.24	- 8.00	11	36	36.52	51	18	11.9
11	36	33.5	9.0	37	24.62	37	13.0	34	13.05	+ 8.78	+0	3.34	+10.61	-1.26	- 8.10	11	37	39.65	51	47	19.0
11	37	59.8	9.2	38	49.29	38	30.0	50	52.85	+14.70	+0	3.34	+ 9.68	-1.26	- 8.00	11	39	4.27	51	30	44.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
11 38 46.0	9.0	39 35.14	39 57.0	3 52.65	-16.77	+0 3.34	+ 9.89	-1.26	- 7.90	11 39 50.10	51 17 13.2
11 39 31.9	9.2	40 18.06	40 54.5	52 4.10	-27.74	+0 3.34	+ 9.58	-1.27	- 7.90	11 40 32.99	51 28 50.5
11 44 18.8	8.9	45 6.59	44 40.3	25 30.45	+20.29	+0 3.35	+ 8.86	-1.28	- 7.60	11 45 21.37	50 56 11.6
ZONE 57, MAY 1, 1871.											
11 17 10.8	8.7	18 1.53	17 41.0	10 34.55	+15.73	+0 3.09	+ 9.21	-1.07	- 9.10	11 18 17.05	51 11 1.6
11 18 7.1	8.8	18 59.23	18 46.3	17 59.95	+ 9.92	+0 3.09	+ 9.51	-1.07	- 9.10	11 19 14.71	51 3 30.6
11 21 8.4	8.8	21 58.98	21 38.8	24 34.35	+15.58	+0 3.09	+ 9.61	-1.09	- 8.90	11 22 14.35	50 57 2.0
11 29 15.4	7.0	30 4.91	29 43.2	30 58.35	+16.41	+0 3.08	+ 9.97	-1.17	- 8.80	11 30 19.99	51 50 38.9*
11 35 29.8	8.0	36 21.62	35 59.7	3 25.25	+16.76	+0 3.10	+ 9.77	-1.20	- 8.40	11 36 36.49	51 18 12.3
11 36 33.5	9.0	37 24.74	37 9.3	34 16.55	+11.66	+0 3.09	+10.51	-1.22	- 8.50	11 37 39.56	51 47 16.5
11 39 31.9	9.0	40 18.28	40 37.0	52 16.10	-14.25	+0 3.09	+ 9.81	-1.24	- 8.30	11 40 32.99	51 28 50.4
11 44 18.8	8.7	45 6.84	44 42.2	25 28.45	+19.05	+0 3.10	+ 8.86	-1.26	- 8.00	11 45 21.39	50 56 10.6
11 47 54.9	8.5	48 43.63	48 22.1	39 31.05	+16.39	+0 3.09	+10.37	-1.30	- 8.00	11 48 58.04	51 42 6.8
11 49 11.4	8.7	50 0.36	49 43.6	3 8.80	+12.85	+0 3.10	+ 9.78	-1.30	- 7.80	11 50 14.74	51 18 25.1
11 52 19.9	9.2	53 8.57	52 46.6	35 59.70	+16.66	+0 3.09	+ 9.87	-1.33	- 7.80	11 53 22.82	51 45 38.0
ZONE 58, MAY 2, 1871.											
10 28 23.0	8.5	29 24.64	29 3.1	9 47.50	+16.49	+0 2.98	+ 9.87	-0.65	-10.80	10 29 41.82	51 11 54.4
10 40 7.6	....	41 3.97	40 33.9	5 38.35	+23.05	+0 2.97	+ 9.17	-0.75	-10.40	10 41 20.73	51 16 8.4
10 41 32.9	9.5	42 29.38	42 9.0	21 51.55	+15.71	+0 2.97	+ 9.21	-0.76	-10.30	10 42 46.07	50 59 47.8
10 42 54.8	8.5	43 51.43	43 23.2	26 44.10	+21.76	+0 2.97	+ 8.99	-0.77	-10.20	10 44 8.06	50 55 1.1
10 48 23.5	9.5	49 17.99	48 56.6	10 6.65	+16.41	+0 2.97	+ 9.14	-0.82	-10.20	10 49 34.44	51 11 32.7
10 49 28.7	8.7	50 25.60	50 0.5	58 52.50	+19.17	+0 2.97	+ 9.88	-0.83	-10.20	10 50 42.02	51 22 50.2
10 57 24.3	8.6	58 19.52	57 52.7	52 2.45	+20.41	+0 2.96	+ 9.54	-0.90	-10.00	10 58 35.65	51 29 40.7
10 59 18.8	9.5	0 13.28	59 48.6	9 10.95	+18.94	+0 2.96	+ 9.75	-0.91	- 9.80	11 0 29.33	51 12 30.9
11 1 54.0	9.5	2 47.81	2 20.1	43 35.55	+21.04	+0 2.96	+10.08	-0.94	- 9.90	11 3 3.78	51 38 8.4
11 3 50.8	8.4	4 43.57	4 25.0	34 47.45	+14.08	+0 2.96	+10.53	-0.96	- 9.80	11 4 59.47	51 46 49.9
11 5 21.6	9.0	6 14.76	5 51.6	30 13.80	+17.54	+0 2.96	+ 9.83	-0.97	- 9.80	11 6 30.62	51 51 26.2
11 7 43.4	9.0	8 36.12	9 2.1	1 42.95	-19.88	+0 2.96	+ 9.47	-0.97	- 9.60	11 8 51.88	51 19 19.3
11 9 21.4	8.9	10 13.68	9 52.3	25 13.40	+16.50	+0 2.95	+ 8.84	-0.98	- 9.50	11 10 29.35	50 56 24.5
11 17 10.8	8.8	18 1.61	17 51.0	10 27.65	+ 8.13	+0 2.95	+ 9.27	-1.05	- 9.30	11 18 17.01	51 11 2.0
11 29 15.4	8.0	30 5.05	29 39.5	30 51.05	+19.28	+0 2.94	+ 9.91	-1.15	- 9.00	11 30 20.01	51 50 50.0
11 35 29.8	8.8	36 21.74	36 36.7	2 56.95	-11.48	+0 2.94	+ 9.76	-1.18	- 8.60	11 36 36.47	51 18 13.4
11 36 33.5	8.8	37 24.78	37 42.1	33 51.70	-13.10	+0 2.94	+10.42	-1.20	- 8.70	11 37 39.47	51 47 17.5
11 44 18.8	9.0	45 6.89	44 37.0	25 32.45	+23.06	+0 2.93	+ 8.79	-1.24	- 8.20	11 45 21.29	50 56 11.6
11 47 54.9	8.8	48 43.73	48 15.9	39 36.75	+21.09	+0 2.93	+10.31	-1.28	- 8.10	11 48 58.00	51 42 6.9
11 49 11.4	9.0	50 0.40	49 36.9	3 14.75	+17.98	+0 2.93	+ 9.73	-1.28	- 8.00	11 50 14.63	51 18 25.3
11 52 19.9	9.2	53 8.69	52 43.4	36 3.55	+19.16	+0 2.93	+ 9.83	-1.32	- 8.00	11 53 22.79	51 45 37.7
ZONE 59, MAY 7, 1871.											
11 26 40.3	8.9	27 31.92	27 0.0	56 10.80	+23.81	+0 2.64	+10.50	-1.05	-10.10	11 27 46.77	52 25 35.0
11 29 23.9	9.2	30 15.51	30 0.3	2 24.80	+11.37	+0 2.64	+10.76	-1.07	- 9.90	11 30 30.26	52 19 8.9
11 31 31.8	8.5	32 23.04	32 4.0	28 53.35	+14.03	+0 2.64	+11.55	-1.10	-10.00	11 32 37.71	52 52 43.6
11 33 41.9	8.5	34 32.63	34 12.0	41 6.95	+15.29	+0 2.64	+10.90	-1.11	- 9.90	11 34 47.22	52 40 30.7
11 36 4.4	8.9	36 53.94	36 30.9	42 22.65	+17.08	+0 2.64	+11.05	-1.13	- 9.80	11 37 8.44	52 39 16.9
11 38 40.8	7.6	39 30.67	39 10.5	44 1.35	+15.01	+0 2.64	+11.30	-1.15	- 9.70	11 39 45.07	52 37 36.4

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
11 49 11.4	8.8	50 0.68	49 40.3	3 11.05	+15.61	+0 2.65	+ 9.76	-1.19	- 9.00	11 50 14.72	51 18 26.2
11 52 19.9	9.3	53 8.77	52 45.2	36 1.80	+17.88	+0 2.65	+ 9.88	-1.23	- 9.00	11 53 22.68	51 45 37.8
12 4 24.8	8.0	5 12.17	4 59.1	49 34.85	+11.45	+0 2.65	+10.27	-1.31	- 8.40	12 5 25.64	51 31 59.3
12 23 48.1	...	24 33.30	24 15.0	41 18.20	+13.89	+0 2.66	+ 9.91	-1.44	- 7.50	12 24 46.08	51 40 19.4
12 26 17.3	8.5	27 0.17	26 43.5	33 43.40	+12.64	+0 2.66	+10.39	-1.46	- 7.40	12 27 12.86	51 47 53.6
12 30 51.0	9.5	31 32.78	31 13.1	23 27.90	+15.19	+0 2.66	+ 9.43	-1.47	- 7.10	12 31 45.35	50 58 11.2
12 32 58.5	9.3	33 43.23	33 29.8	40 24.95	+10.17	+0 2.66	+ 9.80	-1.50	- 7.20	12 33 55.68	51 41 9.5
12 46 14.4	9.0	46 57.12	46 32.9	28 49.85	+18.28	+0 2.67	+10.44	-1.59	- 6.50	12 47 9.10	51 52 54.9
12 50 1.6	8.5	50 44.27	50 23.3	36 16.85	+15.91	+0 2.67	+ 9.80	-1.61	- 6.30	12 50 56.13	51 45 25.4
12 56 30.8	7.8	57 12.29	56 47.8	39 3.65	+18.58	+0 2.67	+10.28	-1.64	- 6.00	12 57 23.93	51 42 42.5
12 58 24.6	8.0	59 3.21	59 34.8	28 35.95	-23.88	+0 2.67	+10.30	-1.66	- 5.90	12 59 14.77	51 52 28.1
13 0 41.8	9.0	1 27.82	1 9.2	47 27.55	+14.15	+0 2.68	+ 9.93	-1.66	- 5.70	13 1 39.34	51 34 14.5
13 3 6.8	7.9	3 48.24	3 28.0	32 23.70	+15.28	+0 2.68	+10.21	-1.68	- 5.60	13 3 59.66	51 49 20.1
13 7 8.3	8.6	7 50.29	7 27.3	34 33.95	+17.42	+0 2.68	+10.45	-1.70	- 5.40	13 8 1.57	51 47 12.9
13 13 41.9	7.3	14 20.87	13 59.0	16 18.85	+16.61	+0 2.68	+ 9 .21	-1.71	- 4.90	13 14 32.01	51 5 27.1
ZONE 60, MAY 10, 1871.											
10 57 24.9	7.0	58 16.43	57 47.0	30 47.40	+22.72	+0 2.84	+ 8.94	-0.72	-11.00	10 58 32.58	50 50 49.7
11 2 19.5	8.6	3 12.79	2 48.7	18 18.40	+18.94	+0 2.84	+ 8.50	-0.75	-10.60	11 3 28.73	50 3 14.3
11 4 18.8	9.0	5 11.29	4 47.2	40 13.95	+18.69	+0 2.84	+ 8.74	-0.77	-10.80	11 5 27.19	50 41 18.4
11 5 33.8	7.5	6 25.42	6 8.5	49 18.70	+13.15	+0 2.84	+ 9.25	-0.78	-10.80	11 6 41.27	50 32 8.6
11 7 42.7	9.0	8 35.49	8 7.8	54 16.05	+20.19	+0 2.83	+12.25	-0.84	-11.50	11 8 51.37	53 27 20.4
11 7 42.7	7.5	8 35.83	8 26.0	54 16.05	+ 7.14	+0 2.83	+12.42	-0.84	-11.50	11 8 51.71	53 27 7.5
11 8 45.3	9.3	9 38.76	9 28.4	43 4.80	+ 8.07	+0 2.84	+ 9.24	-0.81	-10.70	11 9 54.49	50 38 17.2
11 10 54.9	8.6	11 47.58	11 30.8	41 59.05	+13.03	+0 2.84	+ 9.05	-0.83	-10.60	11 12 3.23	50 39 27.6
11 13 45.1	9.3	14 36.81	14 8.1	0 15.05	+22.41	+0 2.84	+ 8.31	-0.84	-10.50	11 14 52.36	50 21 20.2
11 14 49.2	9.4	15 41.92	15 24.2	49 9.15	+13.77	+0 2.84	+ 9.24	-0.86	-10.50	11 15 57.43	50 32 18.3
11 16 1.6	8.7	16 53.97	16 26.5	17 52.65	+21.61	+0 2.84	+ 8.39	-0.86	-10.30	11 17 9.43	50 3 41.9
11 17 13.7	8.1	18 5.59	17 44.4	17 41.50	+16.66	+0 2.84	+ 8.44	-0.87	-10.30	11 18 21.01	50 3 48.1
11 21 12.4	9.7	22 4.25	21 43.0	22 6.15	+16.76	+0 2.84	+ 8.29	-0.90	-10.20	11 22 19.52	49 59 23.3
11 24 37.6	9.5	25 29.68	25 1.0	15 8.15	+22.53	+0 2.84	+ 8.03	-0.93	-10.10	11 25 44.83	50 6 26.7
11 25 49.6	8.8	26 40.43	26 20.0	50 11.60	+15.88	+0 2.84	+ 8.59	-0.94	-10.20	11 26 55.55	50 31 17.0
11 26 49.9	9.5	27 42.03	27 26.9	8 18.00	+11.83	+0 2.84	+ 8.76	-0.95	-10.00	11 27 57.10	50 13 6.8
11 27 44.9	8.7	28 36.30	28 22.3	57 43.95	+10.92	+0 2.84	+ 8.90	-0.96	-10.10	11 28 51.35	50 23 40.0
11 29 4.0	10.0	29 55.54	29 44.0	47 11.55	+ 8.94	+0 2.84	+ 9.04	-0.97	-10.10	11 30 10.55	50 34 10.5
11 30 1.6	7.5	30 50.53	30 37.7	51 15.65	+ 9.97	+0 2.84	+ 8.79	-0.98	-10.00	11 31 5.50	50 30 7.2
11 35 1.4	8.3	35 51.80	35 24.4	42 23.60	+21.26	+0 2.84	+ 8.99	-1.02	- 9.90	11 36 6.59	50 39 10.7
11 36 0.9	9.0	36 51.04	36 38.5	36 18.95	+ 9.68	+0 2.84	+ 9.07	-1.03	- 9.90	11 37 5.79	50 45 3.8
11 36 54.4	8.9	37 44.21	37 30.2	45 37.25	+10.88	+0 2.84	+ 8.81	-1.03	- 9.80	11 37 58.94	50 35 46.5
11 38 3.7	8.9	38 53.68	38 31.2	48 1.80	+17.49	+0 2.84	+ 9.03	-1.04	- 9.80	11 39 8.36	50 33 28.7
11 40 10.3	6.5	40 58.11	40 55.5	50 28.70	+17.59	+0 2.84	+ 8.60	-1.05	- 9.70	11 41 12.72	50 31 1.5
11 42 12.4	8.8	43 2.04	42 35.4	25 57.50	+20.96	+0 2.84	+ 7.97	-1.06	- 9.50	11 43 16.58	49 55 35.6
11 45 16.4	9.4	46 6.68	45 40.0	16 3.20	+20.96	+0 2.84	+ 8.17	-1.08	- 9.40	11 46 21.17	50 5 30.1
11 49 19.3	9.0	50 7.15	49 39.4	10 21.05	+21.79	+0 2.84	+ 8.15	-1.12	- 9.30	11 50 21.43	50 11 13.1
11 50 28.4	9.1	51 17.37	50 51.3	45 7.60	+20.27	+0 2.84	+ 8.61	-1.14	- 9.30	11 51 31.60	50 36 25.5
11 51 37.5	9.2	52 25.79	52 47.2	56 14.00	-16.69	+0 2.84	+ 8.62	-1.14	- 9.30	11 52 39.99	50 24 42.2
11 52 58.8	8.7	53 46.94	53 26.8	4 42.75	+15.72	+0 2.84	+ 9.00	-1.15	- 9.20	11 54 1.09	50 16 46.3
12 2 39.5	9.0	3 28.04	2 57.3	53 48.00	+23.92	+0 2.84	+ 8.94	-1.22	- 8.90	12 3 41.85	50 27 49.5
12 3 32.8	8.5	4 19.93	4 10.0	29 49.80	+ 7.65	+0 2.84	+ 9.74	-1.23	- 9.00	12 4 33.70	50 51 32.1
12 4 35.8	8.5	5 22.63	5 10.7	9 33.65	+ 9.32	+0 2.84	+ 8.97	-1.23	- 8.70	12 5 36.37	50 11 49.4
12 7 41.6	9.5	8 28.72	8 5.1	29 17.35	+18.23	+0 2.84	+ 9.56	-1.27	- 8.80	12 8 42.33	50 52 15.2

ZONE 61, MAY 11, 1871.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.			Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.		R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"		s "		m s	° ' "
10 57 24.9	....	58 16.53	57 59.7	30 35.75	+12.98	+0 2.80	+ 8.92	-0.69	-11.00		10 58 32.67	50 50 51.1
11 10 54.9	7.6	11 47.58	11 20.9	42 6.90	+20.71	+0 2.80	+ 8.81	-0.80	-10.70		11 12 3.22	50 39 26.6
11 13 45.1	9.2	14 36.87	15 10.3	59 25.20	-26.08	+0 2.81	+ 8.72	-0.82	-10.50		11 14 52.41	50 21 21.5
11 14 49.2	9.0	15 41.96	16 16.4	48 24.75	-26.75	+0 2.80	+ 8.76	-0.83	-10.60		11 15 57.46	50 32 21.1
11 16 1.6	8.6	16 54.03	17 24.0	17 6.40	-23.57	+0 2.82	+ 8.11	-0.83	-10.40		11 17 9.50	50 3 42.1
11 17 13.7	8.0	18 5.61	17 53.7	17 32.65	+ 9.35	+0 2.82	+ 8.37	-0.84	-10.40		11 18 21.04	50 3 49.0
11 25 49.6	9.2	26 40.55	26 13.2	50 15.60	+21.32	+0 2.81	+ 8.40	-0.92	-10.20		11 26 55.66	50 31 17.7
11 26 49.9	9.3	27 42.25	27 24.6	8 17.35	+13.86	+0 2.82	+ 8.61	-0.92	-10.10		11 27 57.33	50 13 8.8
11 27 44.9	9.0	28 36.38	28 23.0	57 42.95	+10.45	+0 2.82	+ 8.77	-0.93	-10.10		11 28 51.44	50 23 39.9
11 30 1.6	8.8	30 50.71	30 30.6	51 18.00	+15.65	+0 2.81	+ 8.61	-0.95	-10.10		11 31 5.68	50 30 9.8
11 35 1.4	7.0	35 51.92	35 23.0	42 24.15	+22.43	+0 2.82	+ 8.84	-1.00	-10.00		11 36 6.71	50 39 10.6
11 36 54.4	9.0	37 44.23	37 21.7	45 43.20	+17.48	+0 2.82	+ 8.61	-1.01	- 9.90		11 37 58.96	50 35 46.3
11 38 3.7	9.2	38 53.64	38 37.0	47 56.65	+12.91	+0 2.82	+ 8.93	-1.02	- 9.90		11 39 8.32	50 33 28.6
11 40 10.3	7.5	40 58.07	40 34.3	50 28.70	+18.52	+0 2.82	+ 8.46	-1.03	- 9.80		11 41 12.68	50 31 1.7
11 42 12.4	8.7	43 2.10	42 38.0	25 55.40	+18.99	+0 2.83	+ 7.89	-1.04	- 9.60		11 43 16.65	49 55 35.1
11 44 1.5	9.3	44 50.88	44 31.0	37 15.80	+15.42	+0 2.82	+ 9.00	-1.07	- 9.70		11 45 5.35	50 44 12.1
11 45 16.4	9.0	46 6.82	45 42.7	16 1.00	+19.00	+0 2.83	+ 8.08	-1.06	- 9.50		11 46 21.32	50 5 29.7
11 49 19.3	9.0	50 7.23	49 37.5	10 22.30	+23.28	+0 2.84	+ 8.02	-1.10	- 9.40		11 50 21.53	50 11 12.6
11 50 28.4	8.7	51 17.41	50 59.6	45 1.30	+13.89	+0 2.83	+ 8.55	-1.11	- 9.40		11 51 31.66	50 36 24.8
11 51 37.5	9.5	52 25.79	53 1.0	55 58.90	-27.45	+0 2.84	+ 8.25	-1.12	- 9.40		11 52 40.01	50 24 45.5*
11 52 58.8	8.5	53 47.02	53 28.2	4 41.15	+14.70	+0 2.84	+ 8.89	-1.12	- 9.30		11 54 1.20	50 16 46.1
12 2 39.5	9.0	3 27.94	3 0.0	53 44.80	+21.74	+0 2.84	+ 8.84	-1.20	- 9.00		12 3 41.77	50 27 49.8
12 3 32.8	8.2	4 19.99	4 46.3	29 20.15	-20.32	+0 2.83	+ 9.38	-1.21	- 9.10		12 4 33.77	50 51 32.8
12 4 35.8	8.0	5 22.59	5 11.5	9 32.30	+ 8.70	+0 2.84	+ 8.84	-1.21	- 8.80		12 5 36.35	50 11 49.4
12 7 41.6	9.1	8 28.74	7 59.0	29 22.45	+22.94	+0 2.84	+ 9.37	-1.25	- 8.90		12 8 42.37	50 52 14.0

ZONE 62, MAY 12, 1871.

12 4 24.8	....	5 11.99	4 48.1	49 32.40	+18.20	+0 2.67	+ 9.97	-1.22	- 9.30		12 5 25.57	51 31 57.7
12 23 48.1	....	24 33.22	25 1.0	40 31.65	-21.10	+0 2.67	+ 9.48	-1.37	- 8.60		12 24 46.08	51 40 19.8
12 26 17.3	9.0	27 0.09	27 28.0	32 58.25	-21.12	+0 2.67	+ 9.98	-1.39	- 8.50		12 27 12.86	51 47 53.9
12 56 30.8	....	57 12.19	56 46.6	38 53.80	+19.41	+0 2.67	+10.04	-1.58	- 7.10		12 57 23.89	51 42 42.2
12 58 24.6	....	59 2.99	59 28.2	28 29.40	-19.04	+0 2.66	+10.18	-1.60	- 7.10		12 59 14.60	51 52 28.5
13 7 8.3	....	7 50.31	7 27.0	34 23.75	+17.64	+0 2.66	+10.24	-1.64	- 6.60		13 8 1.63	51 47 12.2
13 14 16.7	....	14 56.49	14 29.0	16 14.90	+21.14	+0 2.67	+ 8.96	-1.66	- 6.10		13 15 7.67	51 5 24.5

ZONE 63, MAY 13, 1871.

11 9 21.4	....	10 14.18	10 37.8	24 29.65	-18.20	+0 2.39	+ 9.49	-0.75	-11.00		11 10 29.52	50 56 23.9
11 13 24.9	9.5	14 17.13	14 51.7	51 4.30	-25.19	+0 2.36	+11.57	-0.83	-11.60		11 14 32.38	53 29 43.5
11 15 39.5	8.7	16 32.38	16 7.7	37 56.40	+18.31	+0 2.38	+11.18	-0.84	-11.30		11 16 47.53	52 43 34.6
11 17 48.6	8.0	18 40.90	18 12.0	32 24.85	+21.38	+0 2.38	+11.17	-0.86	-11.40		11 18 55.97	52 49 9.0
11 22 25.0	9.2	23 16.47	23 54.4	2 9.20	-27.71	+0 2.37	+11.49	-0.90	-11.30		11 23 31.37	53 18 35.7
11 24 58.4	8.5	25 48.16	25 16.4	8 47.45	+23.31	+0 2.37	+11.80	-0.93	-11.20		11 26 2.95	53 12 48.7
11 26 7.5	8.8	26 59.70	27 25.0	52 58.85	-18.00	+0 2.36	+13.24	-0.96	-11.60		11 27 14.46	54 27 57.0
11 27 29.5	8.5	28 20.10	27 54.4	5 49.10	+18.37	+0 2.36	+12.52	-0.97	-11.50		11 28 34.80	54 15 42.4
11 28 54.3	9.0	29 46.24	29 23.3	16 7.15	+16.83	+0 2.37	+11.32	-0.95	-11.20		11 30 0.88	53 5 21.9
11 32 28.2	8.8	33 17.27	32 52.7	25 6.20	+18.14	+0 2.37	+11.73	-0.98	-11.00		11 33 31.77	52 56 24.6
11 33 37.5	9.5	34 29.54	34 8.7	48 0.85	+15.47	+0 2.36	+12.13	-1.01	-11.10		11 34 43.98	53 33 27.5

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
11 35 58.4	7.0	36 50.46	36 27.2	16 13.05	+17.12	+0 2.36	+11.36	-1.01	-10.90	11 37 4.81	53 5 16.3
11 38 25.9	7.4	39 15.40	38 45.6	6 8.05	+22.82	+0 2.38	+ 9.30	-0.99	-10.40	11 39 29.68	51 15 25.4
11 40 9.6	7.5	40 59.43	40 33.6	38 59.95	+18.69	+0 2.35	+12.40	-1.07	-10.90	11 41 13.60	53 42 31.9
11 42 19.0	7.6	43 11.99	42 44.4	51 16.20	+19.61	+0 2.35	+12.87	-1.08	-10.90	11 43 26.09	54 30 17.0
11 44 32.4	9.2	45 23.04	44 56.6	2 41.50	+20.20	+0 2.38	+ 9.67	-1.05	-10.20	11 45 37.08	51 18 49.8
11 49 17.8	8.5	50 6.12	49 33.1	34 21.00	+23.85	+0 2.35	+12.46	-1.14	-10.60	11 50 19.93	53 47 16.2
11 50 32.7	8.8	51 20.88	51 1.9	28 36.70	+13.38	+0 2.34	+13.76	-1.18	-10.80	11 51 34.61	54 52 51.1
11 52 20.9	8.0	53 7.98	52 44.0	15 53.15	+17.22	+0 2.35	+12.37	-1.18	-10.70	11 53 21.65	54 5 37.2
11 53 46.7	8.3	54 34.56	54 10.2	51 23.90	+17.76	+0 2.35	+11.83	-1.18	-10.40	11 54 48.19	53 30 6.7
11 54 42.5	9.0	55 29.64	56 5.0	10 33.10	-25.97	+0 2.36	+11.24	-1.17	-10.30	11 55 43.25	53 10 13.3
11 58 12.1	8.7	59 0.36	58 27.3	47 25.05	+24.06	+0 2.35	+11.93	-1.21	-10.30	11 59 13.82	53 34 12.1
12 2 2.8	9.0	2 50.04	2 23.7	5 17.75	+19.25	+0 2.36	+11.45	-1.23	-10.00	12 3 3.37	53 16 14.4
12 3 5.7	9.0	3 53.58	4 34.3	33 16.30	-29.35	+0 2.35	+12.21	-1.25	-10.10	12 4 6.84	53 47 27.9
12 4 46.1	9.3	5 33.71	5 14.8	59 29.80	+13.80	+0 2.35	+12.21	-1.26	- 9.90	12 5 46.91	53 21 57.7*
12 6 20.2	8.7	7 5.49	6 40.5	25 58.50	+18.01	+0 2.35	+12.23	-1.28	-10.00	12 7 18.62	53 55 33.2
12 8 16.3	7.8	9 1.68	8 34.3	56 50.70	+19.98	+0 2.35	+11.62	-1.29	- 9.80	12 9 14.74	53 24 42.6
12 10 16.4	9.5	11 3.48	10 34.7	15 20.70	+20.67	+0 2.35	+12.26	-1.32	- 9.90	12 11 16.44	54 6 13.8
12 11 59.9	8.5	12 45.62	12 18.2	13 36.45	+20.12	+0 2.36	+11.74	-1.31	- 9.60	12 12 58.56	53 7 57.4
12 13 55.8	8.8	14 41.29	14 14.6	20 51.80	+19.20	+0 2.35	+12.25	-1.35	- 9.70	12 14 54.10	54 0 41.5
12 15 40.4	9.2	16 25.16	15 55.8	18 57.10	+21.13	+0 2.35	+12.73	-1.36	- 9.70	12 16 37.91	54 2 38.7
12 19 7.6	8.0	19 53.29	19 23.3	59 28.05	+21.91	+0 2.36	+12.08	-1.37	- 9.40	12 20 5.94	53 22 8.2
12 22 12.0	8.8	22 55.73	22 29.5	24 27.30	+18.87	+0 2.35	+12.77	-1.41	- 9.40	12 23 8.22	53 57 6.8
12 23 56.8	6.8	24 40.71	24 15.6	35 55.35	+18.16	+0 2.35	+12.04	-1.41	- 9.30	12 24 53.13	53 45 37.4
12 26 24.8	7.8	27 9.65	26 41.2	21 58.75	+22.34	+0 2.39	+ 8.11	-1.32	- 8.30	12 27 22.25	49 59 35.4
12 29 30.9	9.4	30 15.75	29 47.4	33 47.75	+20.53	+0 2.35	+12.48	-1.45	- 9.00	12 30 27.97	53 47 48.4
12 30 49.4	9.0	31 33.75	31 8.1	55 18.75	+18.22	+0 2.35	+12.71	-1.49	- 9.10	12 31 45.87	54 26 15.3
12 32 58.5	9.0	33 43.63	33 15.2	40 25.45	+21.55	+0 2.38	+ 9.72	-1.41	- 8.40	12 33 55.89	51 41 9.7
12 34 34.8	8.8	35 19.49	34 57.4	15 23.00	+16.98	+0 2.38	+ 9.16	-1.41	- 8.20	12 35 31.73	51 6 7.3
12 37 6.5	9.0	37 50.22	37 18.0	17 3.05	+24.22	+0 2.38	+10.36	-1.45	- 8.30	12 38 2.31	52 4 35.7
12 38 47.3	9.0	39 29.40	39 4.1	34 44.50	+18.30	+0 2.35	+12.65	-1.52	- 8.60	12 39 41.26	53 46 50.5
12 40 47.2	8.0	41 27.64	40 59.3	48 59.35	+20.58	+0 2.35	+12.24	-1.53	- 8.50	12 41 39.44	53 32 37.7
12 41 39.1	7.0	42 21.18	42 11.5	13 15.85	+ 7.12	+0 2.35	+11.89	-1.52	- 8.30	12 42 32.99	53 8 7.6
12 45 2.7	8.8	45 45.38	45 20.6	10 27.25	+18.19	+0 2.35	+11.38	-1.55	- 8.20	12 45 57.05	53 11 7.1
12 48 6.7	10.0	48 49.75	48 26.0	11 20.05	+17.46	+0 2.35	+11.50	-1.57	- 8.10	12 49 1.31	53 10 14.0
ZONE 64, MAY 14, 1871.											
11 2 57.3	8.6	3 51.98	3 32.5	37 1.50	+14.11	+0 2.36	+12.14	-0.72	-12.10	11 4 7.67	53 44 27.3
11 3 50.8	8.4	4 43.89	5 5.7	34 6.55	-16.51	+0 2.37	+10.35	-0.69	-11.50	11 4 59.47	51 46 50.3
11 5 14.3	8.0	6 7.76	5 56.9	49 32.15	+ 7.93	+0 2.36	+12.33	-0.74	-12.00	11 6 23.35	53 31 50.6
11 6 12.9	7.8	7 5.73	6 51.7	43 42.50	+10.16	+0 2.36	+12.31	-0.75	-11.90	11 7 21.28	53 37 42.5
11 7 42.7	8.0	8 35.97	8 3.4	54 17.65	+23.76	+0 2.36	+11.99	-0.76	-11.90	11 8 51.46	53 27 20.5
11 7 42.7	6.5	8 36.27	8 22.0	54 17.65	+10.42	+0 2.36	+12.21	-0.76	-11.90	11 8 51.76	53 27 7.4
11 9 21.4	9.2	10 14.08	9 53.0	25 2.50	+16.27	+0 2.38	+ 8.82	-0.73	-11.20	11 10 29.43	50 56 25.5
11 13 24.9	9.2	14 17.05	13 47.9	51 50.20	+21.26	+0 2.36	+11.72	-0.81	-11.80	11 14 32.32	53 29 44.8
11 15 39.5	7.5	16 32.34	16 0.2	38 0.70	+23.79	+0 2.37	+11.05	-0.82	-11.50	11 16 47.50	52 43 36.3
11 17 48.6	7.8	18 40.96	18 19.2	32 18.65	+16.13	+0 2.37	+11.16	-0.84	-11.50	11 18 56.04	52 49 10.7
11 22 25.0	8.6	23 16.33	22 41.8	3 2.35	+25.23	+0 2.36	+11.62	-0.88	-11.40	11 23 31.24	53 18 36.4
11 26 7.5	8.4	26 59.64	26 30.2	53 36.55	+20.91	+0 2.36	+13.05	-0.94	-11.70	11 27 14.42	54 27 58.8
11 27 29.5	8.2	28 20.12	27 54.1	5 48.80	+18.58	+0 2.36	+12.45	-0.95	-11.60	11 28 34.84	54 15 43.7
11 28 54.3	9.5	29 46.14	29 18.2	16 10.55	+20.50	+0 2.36	+11.23	-0.93	-11.30	11 30 0.79	53 5 22.9
11 31 26.9	10.0	32 18.61	32 39.6	54 11.25	-15.31	+0 2.35	+12.13	-0.96	-11.30	11 32 33.16	53 26 47.1
11 32 28.2	8.2	33 17.09	33 37.4	24 32.55	-14.97	+0 2.35	+11.68	-0.96	-11.10	11 33 31.59	52 56 25.9
11 33 37.5	9.5	34 29.48	34 19.7	47 52.10	+ 7.29	+0 2.35	+12.13	-0.98	-11.20	11 34 43.94	53 33 28.9

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
11 35 58.4	7.0	36 50.38	36 29.7	16 10.80	+15.21	+0 2.35	+11.33	-0.99	-11.00	11 37 4.74	53 5 17.4
11 38 25.9	7.0	39 15.40	38 51.2	6 1.65	+18.53	+0 2.37	+ 9.33	-0.97	-10.50	11 39 29.69	51 15 28.3
11 40 9.6	8.0	40 59.37	40 36.1	38 56.70	+16.88	+0 2.35	+12.34	-1.04	-11.00	11 41 13.57	53 42 34.1
11 42 19.0	7.8	43 11.85	42 51.7	51 8.50	+14.28	+0 2.34	+12.87	-1.06	-11.00	11 43 25.96	54 30 20.2
11 44 32.4	9.4	45 22.94	44 59.3	2 38.45	+18.05	+0 2.37	+ 9.62	-1.03	-10.30	11 45 36.99	51 18 51.4
11 47 57.1	9.8	48 46.91	48 26.5	28 40.60	+14.72	+0 2.35	+12.53	-1.11	-10.80	11 49 0.79	53 52 48.2
11 49 17.8	8.0	50 6.04	49 56.8	34 2.75	+ 6.65	+0 2.34	+12.56	-1.12	-10.80	11 50 19.86	53 47 18.0
11 50 32.7	8.5	51 20.82	50 55.5	28 39.95	+17.81	+0 2.34	+13.61	-1.16	-11.00	11 51 34.57	54 52 52.8
11 52 20.9	8.4	53 7.92	52 45.0	15 50.60	+17.98	+0 2.34	+12.30	-1.16	-10.80	11 53 21.60	54 5 41.2
11 53 46.7	9.8	54 34.44	54 10.8	51 22.70	+17.19	+0 2.35	+11.74	-1.16	-10.60	11 54 48.09	53 30 7.9
11 58 12.1	7.5	59 0.26	58 36.4	47 16.70	+17.37	+0 2.35	+11.94	-1.19	-10.50	11 59 13.74	53 34 14.4
12 2 2.8	...	2 49.82	2 26.7	5 15.50	+16.91	+0 2.35	+11.34	-1.22	-10.20	12 3 3.15	53 16 14.9
12 4 46.1	9.2	5 33.67	5 5.9	59 30.35	+20.30	+0 2.34	+11.99	-1.24	-10.10	12 5 46.88	53 22 4.2
12 6 30.2	8.3	7 5.39	6 49.9	25 51.85	+11.17	+0 2.34	+12.20	-1.26	-10.20	12 7 18.53	53 55 33.7
12 8 16.3	6.8	9 1.56	8 36.0	56 48.00	+18.67	+0 2.34	+11.68	-1.27	-10.00	12 9 14.63	53 24 44.7
12 10 16.4	9.5	11 3.24	10 35.1	15 21.50	+20.17	+0 2.34	+12.18	-1.30	-10.10	12 11 16.21	54 6 13.1
12 11 59.9	7.9	12 45.36	12 27.3	13 28.30	+13.29	+0 2.34	+11.73	-1.29	- 9.80	12 12 58.30	53 7 59.4
12 13 55.8	8.0	14 41.09	14 16.3	20 49.45	+17.83	+0 2.34	+12.17	-1.33	- 9.90	12 14 53.91	54 0 43.1
12 15 40.4	9.1	16 25.02	15 52.3	19 0.25	+23.42	+0 2.34	+12.58	-1.34	- 9.90	12 16 37.78	54 2 38.4
12 17 54.0	10.0	18 40.53	18 19.8	48 40.35	+14.93	+0 2.34	+12.15	-1.35	- 9.70	12 18 53.22	53 32 49.6
12 19 7.6	8.0	19 53.17	19 40.7	59 15.30	+ 9.13	+0 2.34	+12.14	-1.35	- 9.60	12 20 5.82	53 22 9.0
12 20 45.2	10.2	21 31.39	22 6.2	49 33.55	-24.71	+0 2.34	+13.16	-1.40	- 9.90	12 21 43.91	54 31 17.7
12 22 12.0	8.5	22 55.79	22 41.8	24 16.05	+10.08	+0 2.34	+12.76	-1.39	- 9.60	12 23 8.29	53 57 9.9
12 23 56.8	6.3	24 40.57	24 14.3	35 54.45	+19.03	+0 2.34	+11.90	-1.40	- 9.50	12 24 52.99	53 45 39.7
12 26 24.8	7.5	27 9.53	26 49.0	21 51.15	+16.13	+0 2.36	+ 8.12	-1.30	- 8.50	12 27 22.12	49 59 37.5
12 29 30.9	9.5	30 15.63	29 44.3	33 48.45	+22.63	+0 2.34	+12.30	-1.44	- 9.20	12 30 27.85	53 47 50.3
12 30 49.4	8.8	31 33.59	31 10.8	55 15.40	+16.23	+0 2.33	+12.59	-1.47	- 9.30	12 31 45.71	54 26 17.2
12 32 58.5	9.2	33 43.51	33 18.5	40 23.00	+18.97	+0 2.36	+ 9.65	-1.40	- 8.60	12 33 55.76	51 41 10.2
12 34 34.8	8.6	35 19.47	34 54.7	15 25.70	+19.06	+0 2.35	+ 9.02	-1.39	- 8.40	12 35 31.70	51 6 7.2
12 37 6.5	9.2	37 50.20	37 30.4	16 56.75	+14.89	+0 2.34	+10.36	-1.44	- 8.50	12 38 2.26	52 4 33.4
12 38 47.3	9.0	39 29.26	39 2.7	34 48.75	+19.24	+0 2.33	+12.50	-1.50	- 8.80	12 39 41.12	53 46 47.7
12 40 47.2	6.9	41 27.58	41 2.8	48 55.35	+18.03	+0 2.33	+12.12	-1.51	- 8.70	12 41 39.38	53 32 39.7
12 41 39.1	6.8	42 21.06	42 5.7	13 18.75	+11.31	+0 2.33	+11.72	-1.51	- 8.50	12 42 32.86	53 8 9.4
12 45 2.7	8.9	45 45.30	45 22.0	10 24.15	+17.09	+0 2.33	+11.26	-1.53	- 8.40	12 45 56.97	53 11 9.7
12 48 6.7	9.8	48 49.85	48 22.5	11 23.85	+20.10	+0 2.33	+11.34	-1.55	- 8.30	12 49 1.41	53 10 13.4
ZONE 65, MAY 15, 1871.											
11 26 40.3	8.6	27 32.22	27 1.4	55 58.90	+22.98	+0 2.28	+10.38	-0.87	-11.20	11 27 46.89	52 25 35.9
11 29 23.9	9.0	30 15.73	29 54.7	2 17.35	+15.71	+0 2.28	+10.58	-0.90	-11.10	11 30 30.29	52 19 10.4
11 31 31.8	8.5	32 23.34	...	...	...	+0 2.27	...	-0.93	...	11 32 37.81	...
11 33 41.9	8.4	34 32.83	34 11.2	40 57.10	+16.03	+0 2.27	+10.76	-0.95	-11.10	11 34 47.21	52 40 31.0
11 36 4.4	8.5	36 54.14	36 29.0	42 13.95	+18.64	+0 2.27	+10.89	-0.96	-11.00	11 37 8.44	52 39 16.9
11 38 40.8	7.9	39 30.87	39 0.7	43 59.50	+22.43	+0 2.28	+11.05	-0.99	-11.00	11 39 45.07	52 37 35.7
11 44 18.8	...	45 7.19	45 28.8	24 42.15	-16.72	+0 2.29	+ 9.29	-1.00	-10.30	11 45 21.19	50 56 12.2
11 49 11.4	9.0	50 0.96	50 17.3	2 31.75	-12.47	+0 2.29	+ 9.60	-1.04	-10.30	11 50 14.79	51 18 27.0
11 52 19.9	9.0	53 8.95	52 36.2	35 58.10	+24.77	+0 2.28	+ 9.65	-1.08	-10.40	11 53 22.64	51 45 37.8
12 4 24.8	9.6	5 12.29	4 43.4	49 44.40	+22.00	+0 2.29	+10.00	-1.16	- 9.90	12 5 25.55	51 31 49.6
12 14 24.6	9.7	15 9.07	15 35.9	25 20.30	-20.67	+0 2.30	+ 8.72	-1.23	- 9.40	12 15 21.99	50 55 30.4
12 23 48.1	...	24 33.62	24 59.0	40 34.65	-19.28	+0 2.29	+ 9.62	-1.31	- 9.20	12 24 46.16	51 40 18.8
12 26 17.3	8.9	27 0.39	26 45.5	33 30.60	+11.28	+0 2.29	+10.28	-1.33	- 9.10	12 27 12.84	51 47 54.3
12 30 51.0	...	31 33.02	31 58.3	22 41.05	-19.50	+0 2.30	+ 9.16	-1.34	- 8.70	12 31 45.36	50 58 12.6
12 32 58.5	...	33 43.63	33 20.6	40 21.25	+17.45	+0 2.29	+ 9.61	-1.38	- 8.80	12 33 55.83	51 41 9.8
12 44 9.8	9.5	44 53.58	44 35.1	18 39.10	+14.24	+0 2.30	+ 9.46	-1.44	- 8.20	12 45 5.44	51 2 49.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.			Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.		R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"		s	"	h m s	° ' "
12 46 14.4	9.0	46 57.40	47 17.9	28 4.65	-15.49	+0 2.29	+10.27	-1.47	-	8.30	12 47 9.12	51 52 55.4
12 50 1.6	....	50 44.55	50 22.2	36 7.05	+16.97	+0 2.29	+ 9.81	-1.50	-	8.10	12 50 56.14	51 45 25.5
12 58 24.6	8.6	59 3.53	58 42.5	29 5.05	+15.87	+0 2.29	+10.41	-1.55	-	7.70	12 59 14.82	51 52 28.1
13 0 41.8	8.8	1 28.18	1 11.3	47 15.35	+12.86	+0 2.29	+ 9.83	-1.56	-	7.50	13 1 39.41	51 34 14.6
13 3 6.8	....	3 48.54	3 22.0	32 17.40	+20.05	+0 2.29	+10.62	-1.58	-	7.40	13 3 59.67	51 49 20.3
13 7 8.3	....	7 50.77	7 29.0	34 22.15	+16.51	+0 2.29	+10.33	-1.61	-	7.20	13 8 1.75	51 47 12.9
13 13 41.9	....	14 21.13	13 57.8	16 7.60	+17.92	+0 2.30	+ 9.08	-1.61	-	6.80	13 14 31.99	51 5 28.7
ZONE 66, MAY 18, 1871.												
11 49 31.5	9.2	50 29.22	49 56.8	17 46.15	-25.63	-0 2.52	+12.35	-1.05	-	11.40	11 50 38.24	54 1 16.7
11 50 32.7	8.8	51 25.66	51 18.7	26 31.40	- 5.42	-0 2.62	+13.39	-1.08	-	11.60	11 51 34.53	54 52 52.5
11 52 20.9	8.5	53 13.02	52 40.1	13 23.95	-25.98	-0 2.52	+12.51	-1.07	-	11.40	11 53 21.93	54 5 38.7
11 53 54.4	9.0	54 45.88	54 9.0	35 44.15	-29.05	-0 2.50	+11.89	-1.08	-	11.30	11 54 54.76	54 43 14.9
11 54 29.8	9.5	55 22.32	55 31.3	43 21.75	+ 6.99	-0 2.61	+13.57	-1.10	-	11.50	11 55 31.05	54 36 14.8
11 57 17.7	8.0	58 9.26	57 30.0	31 24.50	-30.44	-0 2.61	+12.93	-1.13	-	11.40	11 58 17.87	54 47 34.1
11 58 22.9	7.7	59 15.98	58 50.2	8 19.90	-20.34	-0 2.53	+12.67	-1.13	-	11.20	11 59 24.63	54 10 48.8
12 1 44.9	8.2	2 36.75	2 4.7	56 58.75	-25.11	-0 2.57	+12.63	-1.16	-	11.10	12 2 45.22	54 22 5.2
12 2 53.4	9.5	3 47.16	3 24.1	11 48.35	-18.23	-0 2.51	+12.42	-1.16	-	11.00	12 3 55.65	54 7 22.4
12 4 15.4	8.5	5 5.11	4 45.0	12 5.60	-15.79	-0 2.50	+12.50	-1.17	-	11.00	12 5 13.56	54 7 7.6
12 4 15.4	8.5	5 6.24	4 58.5	12 5.60	- 6.08	-0 2.50	+12.58	-1.17	-	11.00	12 5 14.69	54 7 17.4
12 16 50.0	8.2	17 40.32	17 28.0	28 17.40	- 9.54	-0 2.62	+13.63	-1.29	-	10.80	12 17 48.11	54 51 3.7
12 18 34.9	9.2	19 24.60	18 49.4	44 52.80	-28.16	-0 2.45	+12.13	-1.27	-	10.40	12 19 32.56	53 34 8.6
12 20 17.4	9.2	21 9.42	20 42.8	33 30.60	-20.67	-0 2.61	+13.42	-1.32	-	10.60	12 21 17.08	54 45 39.4
12 21 28.1	8.5	22 19.34	21 56.2	32 23.15	-18.02	-0 2.60	+13.33	-1.33	-	10.50	12 22 26.96	54 46 49.6
12 23 48.1	6.8	24 38.26	24 5.9	38 39.45	-27.06	-0 2.26	+10.05	-1.26	-	9.70	12 24 46.30	51 40 21.8
12 26 17.3	8.0	27 5.10	26 27.5	31 1.40	-31.32	-0 2.26	+ 9.66	-1.28	-	9.60	12 27 13.05	51 47 55.4
12 28 5.7	7.3	28 53.02	28 18.9	16 2.35	-28.24	-0 2.28	+ 9.98	-1.28	-	9.60	12 29 0.88	52 2 58.0
12 29 1.6	8.3	29 48.30	29 25.4	24 30.20	-19.03	-0 2.28	+10.53	-1.31	-	9.50	12 29 56.11	51 54 40.0
12 30 45.6	9.8	31 35.24	31 42.3	0 20.35	+ 5.84	-0 2.31	+10.45	-1.33	-	9.60	12 31 42.94	52 19 14.6
12 33 5.9	7.8	33 53.66	33 21.4	54 19.15	-26.54	-0 2.35	+10.88	-1.35	-	9.50	12 34 1.22	52 24 44.1
12 33 48.1	8.9	34 35.86	34 30.6	9 17.50	- 4.38	-0 2.31	+10.95	-1.35	-	9.40	12 34 43.45	52 10 8.1
12 36 10.5	9.3	36 59.34	36 22.5	24 3.35	-29.20	-0 2.51	+12.35	-1.41	-	9.80	12 37 6.53	53 54 58.6
12 36 57.1	8.7	37 43.72	37 39.9	32 42.05	- 2.95	-0 2.62	+13.51	-1.46	-	9.90	12 37 50.68	54 46 47.2
12 38 54.4	9.0	39 42.46	39 17.9	14 45.15	-19.44	-0 2.52	+12.87	-1.45	-	9.70	12 39 49.51	54 4 27.3
12 39 52.7	8.3	40 40.22	40 21.9	50 13.50	-14.32	-0 2.57	+12.71	-1.47	-	9.70	12 40 47.14	54 29 4.0
12 43 1.2	8.7	43 46.80	43 19.9	40 12.55	-20.96	-0 2.61	+12.83	-1.49	-	9.60	12 43 53.56	54 38 58.7
12 45 16.2	8.8	46 2.36	45 52.4	47 23.00	- 8.19	-0 2.37	+10.99	-1.44	-	9.00	12 46 9.45	52 31 59.9
12 48 6.7	9.6	48 54.50	48 19.2	8 50.00	-28.50	-0 2.44	+11.56	-1.48	-	9.10	12 49 1.36	53 10 13.3
12 49 56.8	8.9	50 42.14	50 14.4	32 38.30	-21.52	-0 2.61	+13.32	-1.55	-	9.30	12 50 48.60	54 46 33.7
12 49 56.8	6.8	50 42.48	50 19.4	32 38.30	-17.94	-0 2.61	+13.38	-1.55	-	9.30	12 50 48.94	54 46 37.3
12 52 1.8	9.2	52 48.44	52 28.0	12 15.10	-14.61	-0 2.52	+12.56	-1.54	-	9.10	12 52 54.98	54 7 3.4
12 56 36.3	8.2	57 22.04	57 8.1	43 11.75	-10.85	-0 2.58	+13.34	-1.59	-	9.00	12 57 28.29	54 36 11.8
12 58 7.3	7.0	58 51.86	58 43.6	41 56.25	- 6.47	-0 2.59	+13.20	-1.60	-	9.00	12 58 58.05	54 37 31.7
12 59 31.1	....	0 16.26	0 49.7	38 50.00	+26.01	-0 2.61	+13.32	-1.62	-	8.80	13 0 22.36	54 41 10.8
13 1 55.8	8.5	2 41.48	2 8.8	5 30.25	-25.74	-0 2.55	+12.33	-1.62	-	8.70	13 2 47.59	54 13 38.1
13 4 1.1	8.9	4 46.24	4 17.2	1 32.75	-22.79	-0 2.54	+12.52	-1.63	-	8.60	13 4 52.28	54 17 39.1
13 7 8.3	8.8	7 55.40	7 29.7	31 58.45	-21.41	-0 2.27	+10.02	-1.57	-	7.90	13 8 1.86	51 47 13.3
13 8 25.9	8.7	9 10.54	8 47.6	50 38.55	-17.92	-0 2.57	+12.73	-1.67	-	8.50	13 9 16.36	54 28 38.9
13 9 25.5	9.0	10 9.26	9 55.6	7 32.35	-10.79	-0 2.55	+12.75	-1.67	-	8.20	13 10 15.09	54 11 52.7
13 12 28.1	9.2	13 14.24	12 36.7	52 59.10	-29.38	-0 2.57	+12.79	-1.70	-	8.20	13 13 19.91	54 26 7.7
13 14 52.5	8.5	15 37.18	15 3.9	48 16.75	-26.04	-0 2.59	+13.01	-1.71	-	8.10	13 15 42.74	54 30 54.0
13 16 35.5	9.0	17 18.32	16 46.7	18 10.05	-24.77	-0 2.51	+12.45	-1.71	-	7.90	13 17 23.95	54 1 1.8
13 18 20.5	9.5	19 6.42	18 35.1	34 43.60	-24.32	-0 2.59	+13.58	-1.75	-	7.90	13 19 11.81	54 44 30.0

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
13 19 1.5	9.2	19 47.98	19 35.1	36 46.90	-10.04	-0 2.58	+13.30	-1.75	- 7.90	13 19 53.36	54 42 40.8
13 20 48.6	9.4	21 32.50	21 5.8	57 26.85	-22.45	-0 2.24	+ 9.60	-1.64	- 7.10	13 21 38.58	51 21 4 .8
13 22 13.1	9.5	22 56.28	22 21.2	15 56.15	-27.75	-0 2.51	+12.10	-1.74	- 7.60	13 23 1.73	54 3 13.3
13 23 38.5	9.7	24 21.82	24 3.4	52 41.95	-14.41	-0 2.58	+13.09	-1.77	- 7.60	13 24 27.07	54 26 42.0
13 25 28.0	8.5	26 8.06	25 35.2	21 50.75	-26.07	-0 2.51	+12.19	-1.76	- 7.40	13 26 13.38	53 57 21.1
13 26 47.2	7.8	27 29.90	27 0.8	42 45.35	-22.70	-0 2.59	+13.12	-1.79	- 7.50	13 27 35.00	54 36 30.9
13 27 52.0	8.8	28 36.64	28 11.9	17 47.85	-19.54	-0 2.51	+12.53	-1.77	- 7.30	13 28 41.87	54 1 31.3
13 28 53.0	9.2	29 36.02	29 14.9	29 26.30	-16.37	-0 2.59	+13.77	-1.82	- 8.00	13 29 41.00	54 49 56.7
13 31 54.1	6.5	32 36.92	32 36.0	58 31.90	- 0.76	-0 2.23	+ 9.95	-1.70	- 6.60	13 32 42.65	51 21 4.7
13 34 27.9	6.5	35 20.32	35 12.5	10 26.45	- 6.59	-0 2.21	+ 9.27	-1.71	- 6.40	13 35 26.01	51 9 4.2
13 35 29.0	...	36 11.46	36 27.9	19 3.95	+12.98	-0 2.51	+12.81	-1.82	- 6.90	13 36 16.42	54 0 49.5
13 37 34.7	9.3	38 18.58	37 48.1	39 58.50	-23.77	-0 2.62	+13.51	-1.86	- 6.90	13 38 23.25	54 39 19.1
13 38 35.5	8.5	39 17.82	38 57.2	51 1.50	-16.12	-0 2.58	+12.86	-1.86	- 6.80	13 39 22.52	54 28 23.4
13 40 50.9	9.2	41 33.22	40 59.3	10 35.65	-28.64	-0 2.21	+ 9.01	-1.73	- 6.10	13 41 38.72	51 8 33.9
13 44 34.8	9.0	45 16.42	44 44.5	20 44.45	-27.05	-0 2.21	+ 8.91	-1.75	- 5.80	13 45 21.82	50 58 27.5
13 45 54.3	9.5	46 34.98	46 8.3	14 20.80	-20.31	-0 2.51	+12.82	-1.88	- 6.30	13 46 39.57	54 5 1.5
13 47 31.5	8.0	48 11.86	47 38.0	57 14.30	-26.66	-0 2.59	+12.67	-1.91	- 6.30	13 48 16.26	54 22 1.7
13 48 31.5	6.3	49 10.70	48 51.2	58 49.90	-15.31	-0 2.55	+13.10	-1.91	- 6.20	13 49 15.11	54 20 38.1
13 49 35.8	9.5	50 16.34	49 55.5	6 27.25	-16.78	-0 2.45	+11.53	-1.86	- 5.90	13 50 21.01	53 12 58.3
13 51 36.6	8.2	52 15.70	51 43.9	49 3.65	-24.87	-0 2.58	+13.15	-1.93	- 6.10	13 52 19.95	54 30 15.5
ZONE 67, MAY 20, 1871.											
12 46 59.1	9.0	47 42.48	46 51.3	1 43.00	-40.26	+0 1.35	+12.00	-1.48	- 9.80	12 47 53.10	54 17 10.1
12 49 56.8	6.5	50 38.12	50 6.1	32 37.10	-24.93	+0 1.34	+13.14	-1.51	- 9.70	12 50 48.57	54 46 32.8
12 54 40.6	7.5	55 21.54	54 40.5	6 25.50	-33.07	+0 1.37	+11.04	-1.51	- 9.15	12 55 31.98	53 12 35.1
12 58 0.4	9.0	58 42.24	58 8.0	11 41.10	-27.64	+0 1.37	+11.13	-1.52	- 9.00	12 58 52.57	53 7 25.5
13 0 8.7	8.8	0 50.96	1 33.1	25 59.95	+34.21	+0 1.38	+10.65	-1.53	- 8.85	13 1 1.24	52 54 8.3
13 4 1.1	9.0	4 42.04	4 2.9	1 29.35	-30.73	+0 1.35	+12.27	-1.60	- 9.00	13 4 52.00	54 17 35.8
13 12 28.1	9.5	13 10.04	13 34.4	53 47.65	+19.12	+0 1.35	+13.02	-1.67	- 8.60	13 13 19.66	54 26 9.4
13 15 21.0	9.5	16 1.34	15 22.8	18 22.40	-30.47	+0 1.37	+12.29	-1.67	- 8.35	13 16 10.93	54 0 44.9
13 16 59.4	9.0	17 38.58	18 7.4	57 6.65	+22.60	+0 1.36	+12.60	-1.69	- 8.35	13 17 48.06	54 22 54.2
13 19 7.7	8.8	19 48.64	20 13.9	22 47.30	+15.38	+0 1.37	+12.33	-1.69	- 8.20	13 19 58.10	53 57 6.5
13 22 13.1	9.5	22 52.16	22 17.9	15 58.25	-27.12	+0 1.37	+12.06	-1.72	- 8.00	13 23 1.49	54 3 13.4
.....	9.5	26 53.16	26 9.5	57 59.05	-34.30	+0 1.36	+12.50	-1.75	- 7.90	13 27 2.29	54 21 6.4
13 28 22.1	8.6	29 0.28	28 34.7	57 0.10	-20.09	+0 1.36	+12.67	-1.77	- 7.80	13 29 9.33	54 22 20.1
13 35 11.5	9.8	35 49.64	35 4.9	56 56.15	-35.09	+0 1.36	+12.45	-1.81	- 7.40	13 35 58.44	54 22 10.2
13 37 49.0	9.0	38 26.10	38 50.6	56 49.80	+19.22	+0 1.37	+12.71	-1.82	- 7.30	13 38 34.83	54 23 11.6
13 45 26.0	9.0	46 3.12	45 35.0	8 31.40	-22.15	+0 1.38	+12.72	-1.86	- 6.85	13 46 11.62	54 10 50.2
13 48 31.5	6.0	49 6.64	48 28.8	58 35.80	-29.75	+0 1.37	+12.73	-1.88	- 6.75	13 49 15.00	54 20 38.8
13 52 26.3	7.0	53 2.20	52 14.8	47 57.85	-37.06	+0 1.37	+12.88	-1.91	- 6.50	13 53 10.39	54 31 10.5
13 55 20.0	8.8	55 54.70	55 32.2	56 51.75	-17.65	+0 1.37	+12.78	-1.92	- 6.25	13 56 2.82	54 22 36.6
14 1 39.6	9.0	2 14.42	1 32.9	53 11.80	-32.51	+0 1.37	+12.71	-1.96	- 6.00	14 2 22.31	54 26 3.0
14 4 27.5	9.0	5 3.30	4 26.8	50 23.10	-28.56	+0 1.38	+12.45	-1.98	- 5.85	14 5 11.10	54 28 56.0
14 7 8.7	8.9	7 42.82	8 23.0	30 45.35	+31.20	+0 1.37	+12.86	-2.01	- 5.75	14 7 50.46	54 49 34.6
14 10 56.0	8.8	11 30.18	10 54.5	17 36.90	-28.24	+0 1.39	+12.33	-1.99	- 5.40	14 11 37.87	54 1 44.1
14 13 41.7	8.4	14 16.60	13 51.6	48 31.25	-19.55	+0 1.38	+13.18	-2.02	- 5.35	14 14 24.10	54 30 59.9
ZONE 68, MAY 21, 1871.											
12 46 59.1	8.6	47 42.56	47 4.4	1 53.05	-30.04	+0 1.19	+12.35	-1.46	- 9.90	12 47 53.04	54 17 11.6
12 49 56.8	6.0	50 38.42	49 55.2	32 29.20	-33.55	+0 1.19	+12.92	-1.50	- 9.80	12 50 48.73	54 46 32.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	' ° "
12 52 1.8	9.3	52 44.39	53 24.0	13 0.75	+31.27	+0 1.19	+12.28	-1.49	- 9.70	12 52 54.69	54 7 5.7
12 54 40.6	....	55 21.68	54 47.4	6 30.00	-27.66	+0 1.21	+11.26	-1.49	- 9.40	12 55 31.98	53 12 37.0
12 58 0.4	9.0	58 42.50	58 7.4	11 38.95	-28.36	+0 1.21	+11.17	-1.50	- 9.20	12 58 52.69	53 7 27.8
13 0 8.7	8.7	0 51.20	1 22.5	25 52.65	+25.43	+0 1.22	+10.86	-1.51	- 9.10	13 1 1.34	52 54 7.8
13 4 1.1	8.5	4 42.30	5 19.9	2 24.50	+29.55	+0 1.19	+12.46	-1.58	- 9.20	13 4 52.12	54 17 42.0*
13 12 28.1	9.0	13 10.24	12 26.0	52 55.25	-34.63	+0 1.19	+12.54	-1.65	- 8.80	13 13 19.72	54 26 8.4
13 15 21.0	9.2	16 1.56	15 28.0	18 27.40	-26.59	+0 1.20	+12.41	-1.65	- 8.60	13 16 11.00	54 0 44.7
13 22 13.1	9.5	22 52.30	.....	.....	.....	+0 1.19	.....	-1.70	.....	13 23 1.47	.....
.....	9.2	26 53.28	26 9.4	57 59.30	-34.46	+0 1.19	+12.48	-1.74	- 8.10	13 27 2.25	54 21 6.8
13 28 22.1	8.0	29 0.58	29 32.5	57 44.50	+25.03	+0 1.19	+12.69	-1.75	- 8.00	13 29 9.48	54 22 21.7
13 35 11.5	9.5	35 49.88	35 6.9	56 55.30	-33.74	+0 1.19	+12.34	-1.79	- 7.70	13 35 58.53	54 22 13.0
13 37 49.0	8.7	38 26.42	37 48.9	56 3.25	-29.48	+0 1.19	+12.36	-1.81	- 7.50	13 38 34.98	54 23 9.9
13 42 34.0	9.6	43 17.66	42 42.9	48 41.10	-27.21	+0 1.19	+12.97	-1.85	- 7.30	13 43 26.02	54 30 35.9
13 45 26.0	8.7	46 3.34	45 31.3	8 29.25	-25.22	+0 1.19	+12.61	-1.85	- 7.10	13 46 11.66	54 10 50.0
13 48 31.5	6.0	49 6.70	48 30.8	58 36.75	-28.18	+0 1.20	+12.73	-1.87	- 7.00	13 49 14.90	54 20 40.2
13 52 26.3	6.8	53 2.28	52 16.9	47 58.90	-35.50	+0 1.20	+12.65	-1.90	- 6.75	13 53 10.31	54 31 11.6
13 55 20.0	8.3	55 54.94	55 16.1	56 39.55	-30.51	+0 1.20	+12.43	-1.91	- 6.50	13 56 2.90	54 22 36.4
14 1 39.6	8.8	2 14.40	1 37.2	53 14.30	-29.14	+0 1.20	+12.73	-1.95	- 6.30	14 2 22.13	54 26 4.6
14 4 27.5	8.8	5 3.52	4 25.7	50 23.10	-29.58	+0 1.20	+12.35	-1.97	- 6.10	14 5 11.15	54 28 55.7
14 10 56.0	9.0	11 30.36	10 49.5	17 33.35	-32.36	+0 1.21	+12.14	-1.98	- 5.70	14 11 37.88	54 1 44.1
14 13 41.7	8.0	14 16.72	13 45.7	48 27.50	-24.24	+0 1.20	+13.01	-2.01	- 5.60	14 14 24.05	54 30 59.5
ZONE 69, MAY 23, 1871.											
11 57 17.7	....	58 5.86	57 53.7	31 48.80	- 7.52	+0 0.74	+13.33	-1.02	-12.10	11 58 17.93	54 47 34.7
11 58 22.9	7.5	59 12.82	58 58.0	8 33.70	-11.67	+0 0.74	+12.83	-1.01	-12.00	11 59 24.86	54 10 45.3
12 1 44.9	8.0	2 33.50	2 1.8	57 0.95	-24.88	+0 0.74	+12.58	-1.05	-11.90	12 2 45.39	54 22 4.7
12 4 15.4	8.4	5 2.08	4 21.3	11 50.90	-32.21	+0 0.74	+12.11	-1.06	-11.80	12 5 13.88	54 7 7.0
12 4 15.4	8.2	5 3.10	4 32.0	11 50.90	-24.55	+0 0.74	+12.30	-1.06	-11.80	12 5 14.90	54 7 14.9
12 5 9.4	9.0	5 57.88	5 41.2	49 51.80	-13.38	+0 0.74	+13.35	-1.06	-11.60	12 6 9.66	53 29 26.4
12 7 32.4	6.4	8 19.82	7 45.3	11 14.15	-27.23	+0 0.66	+12.25	-1.09	-11.60	12 8 31.41	54 7 49.1
12 8 38.0	9.3	9 24.24	8 52.0	46 13.00	-25.16	+0 0.66	+12.76	-1.11	-11.70	12 9 35.77	54 32 52.8
12 10 20.7	6.0	11 7.90	10 30.0	25 46.20	-30.08	+0 0.66	+11.91	-1.11	-11.50	12 11 19.38	53 53 14.0
12 10 40.7	9.3	11 28.30	.....	.....	.....	+0 0.66	.....	-1.11	.....	12 11 39.77	.....
12 13 6.9	9.1	13 53.50	13 9.4	2 17.95	-34.68	+0 0.66	+12.41	-1.14	-11.50	12 14 4.86	54 16 38.2
12 14 30.4	9.5	15 17.04	14 47.1	47 22.90	-23.37	+0 0.66	+13.02	-1.16	-11.50	12 15 28.32	54 31 45.2
12 16 50.0	8.0	17 36.92	17 0.8	27 59.65	-27.99	+0 0.73	+13.27	-1.19	-11.50	12 17 48.16	54 51 4.2
12 18 34.9	9.1	19 21.20	18 41.3	44 51.15	-31.92	+0 0.74	+12.01	-1.17	-11.20	12 19 32.45	53 34 7.8
12 20 17.4	9.4	21 5.98	20 27.1	33 21.65	-30.23	+0 0.74	+13.17	-1.22	-11.40	12 21 17.09	54 45 40.0
12 21 28.1	9.0	22 15.92	21 41.3	32 17.05	-26.88	+0 0.74	+13.11	-1.23	-11.40	12 22 26.98	54 46 48.0
12 23 48.1	7.8	24 35.12	23 48.5	38 28.85	-38.92	+0 0.75	+ 9.67	-1.17	-10.50	12 24 46.26	51 40 21.7
12 43 1.2	8.5	43 43.42	42 58.0	40 0.30	-35.38	+0 0.73	+12.41	-1.40	-10.50	12 43 53.61	54 38 57.5
12 45 16.2	8.8	45 59.36	45 19.6	47 0.40	-32.61	+0 0.74	+10.52	-1.35	-10.00	12 46 9.65	52 31 58.9
12 48 6.7	9.8	48 51.32	49 12.8	9 36.70	+17.12	+0 0.73	+11.87	-1.39	-10.00	12 49 1.44	53 10 13.9
12 49 56.8	....	50 39.00	50 10.7	32 38.29	-21.98	+0 0.73	+13.32	-1.46	-10.30	12 50 48.89	54 46 34.5
12 52 1.8	9.0	52 45.16	52 7.1	12 0.55	-30.08	+0 0.72	+12.17	-1.45	-10.00	12 52 55.03	54 7 3.5
12 56 36.3	8.0	57 18.64	56 38.9	42 52.35	-30.98	+0 0.72	+12.87	-1.49	-10.00	12 57 28.29	54 36 11.8
12 58 7.3	7.9	58 48.52	58 9.8	41 34.15	-30.17	+0 0.72	+12.74	-1.51	- 9.90	12 58 58.11	54 37 31.0
12 59 31.1	9.0	0 12.92	59 45.5	38 2.10	-21.34	+0 0.72	+13.18	-1.53	- 9.80	13 0 22.44	54 41 12.5
13 0 28.4	9.2	1 11.02	0 42.4	48 52.65	-22.36	+0 0.72	+13.12	-1.53	- 9.80	13 1 20.52	54 30 21.0
13 1 55.8	7.8	2 38.28	2 10.9	5 35.60	-21.57	+0 0.72	+12.35	-1.53	- 9.70	13 2 47.75	54 13 38.3
13 4 1.1	8.8	4 42.90	3 50.9	1 16.95	-40.87	+0 0.72	+12.01	-1.55	- 9.60	13 4 52.28	54 17 37.6
13 7 8.3	9.0	7 52.32	7 20.5	31 56.50	-26.49	+0 0.74	+ 9.82	-1.49	- 8.90	13 8 1.87	51 47 11.2
13 8 25.9	8.6	9 7.06	8 32.3	50 28.25	-27.23	+0 0.72	+12.47	-1.58	- 9.50	13 9 16.26	54 28 41.0

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
13 9 25.5	8.5	10 5.98	10 27.5	8 0.35	+16.94	+0 0.72	+12.76	-1.58	- 9.30	13 10 15.17	54 11 53.5
13 12 28.1	8.9	13 10.84	12 30.3	52 57.50	-31.73	+0 0.72	+12.68	-1.61	- 9.20	13 13 19.89	54 26 8.1
13 14 52.5	8.7	15 33.84	14 53.5	48 12.35	-31.51	+0 0.72	+12.80	-1.63	- 9.20	13 15 42.79	54 30 53.9
13 16 35.5	9.0	17 14.92	16 39.2	18 9.10	-28.25	+0 0.72	+12.32	-1.63	- 9.00	13 17 23.86	54 1 0.3
13 18 20.5	9.3	19 3.00	18 32.3	34 46.35	-23.87	+0 0.71	+13.53	-1.67	- 9.10	13 19 11.77	54 44 28.8
13 19 1.5	9.2	19 44.82	30 6.7	37 14.80	+17.04	+0 0.71	+13.22	-1.67	- 9.00	13 19 53.57	54 42 41.1
13 20 48.6	9.2	21 29.62	20 55.2	57 21.10	-28.93	+0 0.73	+ 9.43	-1.56	- 8.20	13 21 38.75	51 21 46.1
13 22 13.1	9.2	22 53.16	23 29.0	16 51.00	+28.30	+0 0.71	+11.81	-1.67	- 8.70	13 23 1.88	54 3 15.4
13 23 38.5	9.5	24 18.64	24 5.9	52 46.95	- 9.95	+0 0.71	+13.05	-1.69	- 8.70	13 24 27.26	54 26 42.6
13 25 28.0	8.7	26 4.70	25 31.2	21 53.45	-26.54	+0 0.71	+12.11	-1.69	- 8.50	13 26 13.31	53 57 19.0
13 26 47.2	7.8	27 26.12	26 51.7	42 42.50	-26.83	+0 0.71	+12.91	-1.72	- 8.60	13 27 34.59	54 36 30.6
13 27 52.0	7.6	28 32.96	28 6.2	17 48.60	-21.20	+0 0.71	+12.42	-1.70	- 8.40	13 28 41.48	54 1 30.0
13 28 53.0	8.9	29 32.42	29 6.5	29 24.85	-20.09	+0 0.67	+13.68	-1.74	- 9.10	13 29 40.74	54 49 55.5
13 31 54.1	7.4	32 33.68	31 53.3	57 58.30	-34.00	+0 0.70	+ 9.55	-1.64	- 7.70	13 32 42.40	51 21 5.8
13 44 34.8	9.0	45 13.48	44 33.3	20 41.20	-34.09	+0 0.71	+ 8.69	-1.70	- 7.00	13 45 21.85	50 58 24.5
13 45 54.3	9.3	46 31.76	46 11.2	14 26.05	-16.28	+0 0.68	+12.91	-1.82	- 7.50	13 46 39.60	54 5 1.4
13 47 31.5	7.5	48 8.66	47 38.2	57 19.20	-23.93	+0 0.68	+12.76	-1.84	- 7.50	13 48 16.40	54 22 0.7
13 48 31.5	6.0	49 7.26	48 41.7	58 47.05	-20.10	+0 0.68	+13.04	-1.85	- 7.40	13 49 14.96	54 20 37.2
13 49 35.8	9.0	50 13.20	49 48.4	6 24.85	-20.00	+0 0.69	+11.43	-1.81	- 7.10	13 50 21.06	53 12 58.4
13 51 36.6	8.0	52 12.48	51 32.6	48 57.65	-31.21	+0 0.68	+12.95	-1.87	- 7.30	13 52 20.05	54 30 16.1
ZONE 70, MAY 24, 1871.											
12 13 6.9	8.7	13 53.58	13 32.0	2 37.75	-16.98	+0 0.53	+12.89	-1.12	-11.65	12 14 4.83	54 16 35.6
12 14 30.4	9.2	15 17.12	14 53.6	47 30.10	-18.37	+0 0.52	+13.16	-1.14	-11.70	12 15 28.28	54 31 42.1
12 16 50.0	8.0	17 36.90	16 58.1	27 57.60	-30.09	+0 0.52	+13.33	-1.17	-11.70	12 17 47.95	54 51 3.2
12 18 34.9	9.0	19 21.34	18 49.1	44 57.30	-25.76	+0 0.53	+12.26	-1.15	-11.30	12 19 32.40	53 34 7.2
12 20 17.4	9.2	21 6.14	20 23.7	33 19.65	-32.95	+0 0.52	+13.20	-1.20	-11.50	12 21 17.05	54 45 38.4
12 21 28.1	9.0	22 15.96	21 48.3	32 21.90	-21.52	+0 0.52	+13.36	-1.21	-11.50	12 22 26.82	54 46 47.8
12 23 48.1	7.9	24 35.22	24 2.5	38 42.25	-27.31	+0 0.56	+10.08	-1.15	-10.70	12 24 46.19	51 40 19.2
12 26 17.3	8.2	27 2.14	26 28.9	31 8.15	-27.66	+0 0.56	+ 9.80	-1.17	-10.60	12 27 13.02	51 47 52.9
12 28 5.7	7.5	28 50.00	28 18.3	16 5.00	-26.26	+0 0.56	+10.08	-1.19	-10.65	12 29 0.79	52 2 57.8
12 29 1.6	8.7	29 45.42	29 24.0	24 34.40	-17.78	+0 0.56	+10.61	-1.20	-10.60	12 29 56.18	51 54 37.5
12 30 45.6	9.8	31 32.24	32 2.6	59 50.65	-24.36	+0 0.56	+10.92	-1.22	-10.60	12 31 42.92	52 19 15.0
12 31 27.1	8.7	32 14.54	32 52.0	20 14.75	+31.11	+0 0.56	+ 9.77	-1.23	-10.50	12 32 25.19	51 59 45.4
12 33 5.9	7.0	33 50.58	33 26.7	54 27.65	-19.64	+0 0.55	+11.14	-1.24	-10.60	12 34 1.15	52 24 43.1
12 33 48.1	8.7	34 32.82	34 36.1	9 28.55	+ 2.73	+0 0.56	+10.99	-1.24	-10.50	12 34 43.39	52 10 4.5
12 36 10.5	9.4	36 56.14	36 12.5	23 59.25	-34.59	+0 0.53	+12.36	-1.30	-10.80	12 37 6.48	53 54 57.7
12 36 57.1	8.8	37 40.42	37 30.4	32 38.20	- 7.77	+0 0.52	+13.70	-1.34	-11.00	12 37 50.64	54 46 46.8
12 38 54.4	9.0	39 39.30	39 12.4	14 45.65	-21.25	+0 0.53	+12.96	-1.33	-10.70	12 39 49.52	54 4 25.5
12 39 52.7	8.6	40 36.96	40 15.7	50 12.20	-15.88	+0 0.52	+12.78	-1.35	-10.80	12 40 47.09	54 29 4.1
12 43 1.2	9.3	43 43.62	43 9.1	40 9.85	-26.89	+0 0.52	+12.81	-1.38	-10.70	12 43 53.62	54 38 55.8
12 45 16.2	9.4	45 59.46	45 15.1	46 55.85	-36.38	+0 0.56	+10.51	-1.33	-10.20	12 46 9.59	52 31 58.7
12 48 6.7	9.8	48 51.28	48 18.1	8 53.65	-26.81	+0 0.55	+11.74	-1.37	-10.20	12 49 1.24	53 10 11.9
12 49 56.8	8.9	50 38.72	49 55.5	32 26.35	-33.56	+0 0.53	+13.16	-1.44	-10.50	12 50 48.43	54 46 33.7
12 49 56.8	6.8	50 39.16	49 58.7	32 26.35	-31.46	+0 0.53	+13.10	-1.44	-10.50	12 50 48.87	54 46 35.7
12 52 1.8	9.0	52 45.14	51 58.5	11 53.60	-36.80	+0 0.54	+12.07	-1.43	-10.20	12 52 54.85	54 7 2.6
12 56 36.3	8.5	57 18.76	56 43.4	42 55.45	-27.62	+0 0.53	+13.12	-1.48	-10.20	12 57 28.23	54 36 11.3
12 58 7.3	6.8	58 48.58	58 15.7	41 38.40	-25.65	+0 0.53	+13.00	-1.49	-10.10	12 58 58.00	54 37 30.5
12 59 31.1	9.3	0 13.06	59 53.0	38 7.65	-15.65	+0 0.53	+13.41	-1.51	-10.00	13 0 22.41	54 41 11.9
13 1 55.8	8.2	2 38.16	1 58.0	5 26.24	-31.65	+0 0.54	+12.28	-1.51	- 9.90	13 2 47.47	54 13 36.4
13 7 8.3	9.2	7 52.42	7 13.0	31 47.10	-32.82	+0 0.57	+ 9.81	-1.47	- 9.10	13 8 1.82	51 47 13.3
13 8 25.9	8.6	9 7.20	8 43.0	50 37.95	-18.94	+0 0.53	+12.82	-1.56	- 9.70	13 9 16.23	54 28 38.8
13 9 25.5	8.8	10 6.04	9 45.1	7 27.00	-16.47	+0 0.54	+12.79	-1.56	- 9.50	13 10 15.07	54 11 52.5

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	' "
13 14 52.5	8.7	15 33.98	14 48.3	48 8.20	-35.73	+0 0.53	+12.86	-1.61	- 9.40	13 15 42.76	54 30 52.8
13 16 35.5	9.5	17 15.12	16 38.3	18 7.30	-28.46	+0 0.55	+12.45	-1.61	- 9.20	13 17 23.91	54 1 1.0
13 19 1.5	9.0	19 44.78	19 38.1	36 52.80	- 5.21	+0 0.54	+13.46	-1.65	- 9.20	13 19 53.38	54 42 40.0
13 20 48.6	9.3	21 29.76	21 4.0	57 27.80	-21.70	+0 0.58	+ 9.73	-1.55	- 8.40	13 21 38.75	51 21 45.8
13 23 38.5	9.8	24 18.78	23 41.2	52 28.55	-29.45	+0 0.54	+12.88	-1.68	- 8.90	13 24 27.24	54 26 40.3
13 25 28.0	8.4	26 4.92	25 30.4	21 51.00	-27.34	+0 0.55	+12.28	-1.67	- 8.70	13 26 13.39	53 57 19.8
13 26 47.2	7.8	27 26.60	26 54.2	42 43.70	-25.27	+0 0.54	+13.19	-1.70	- 8.80	13 27 34.92	54 36 30.2
13 27 52.0	8.7	28 33.52	28 15.2	17 55.10	-14.48	+0 0.56	+12.74	-1.69	- 8.60	13 28 41.90	54 1 29.5
13 31 54.1	....	32 33.72	....	....	....	+0 0.59	....	-1.62	....	13 32 42.35	....
13 35 29.0	9.0	36 8.32	....	....	....	+0 0.54	....	-1.75	....	13 36 16.40	....
13 37 34.7	9.2	38 15.16	37 33.1	39 50.20	-32.81	+0 0.54	+13.44	-1.78	- 8.30	13 38 23.07	54 39 18.4
13 40 50.9	9.2	41 30.36	40 48.3	10 30.00	-35.57	+0 0.59	+ 8.92	-1.67	- 7.45	13 41 38.72	51 8 32.6
13 44 34.8	8.9	45 13.52	44 37.0	20 42.50	-30.95	+0 0.59	+ 8.90	-1.68	- 7.20	13 45 21.79	50 58 25.5
13 45 54.3	9.7	46 31.89	45 59.4	14 17.40	-25.68	+0 0.55	+12.90	-1.81	- 7.80	13 46 39.61	54 4 59.5
13 47 31.5	8.2	48 8.68	47 34.4	57 16.55	-26.92	+0 0.54	+12.86	-1.83	- 7.70	13 48 16.29	54 21 59.4
13 48 31.5	5.6	49 7.48	48 43.0	58 47.95	-19.23	+0 0.54	+13.20	-1.84	- 7.70	13 49 15.05	54 20 36.2
13 49 35.8	9.5	50 13.22	50 14.4	6 46.45	+ 0.97	+0 0.56	+11.81	-1.79	- 7.35	13 50 20.97	53 12 57.1
13 51 36.6	8.4	52 12.52	51 31.1	48 56.85	-32.38	+0 0.54	+13.09	-1.86	- 7.50	13 52 19.96	54 30 14.8
ZONE 71, MAY 25, 1871.											
12 49 16.3	8.0	50 0.30	50 26.9	55 54.15	+21.35	+0 0.33	+11.40	-1.37	-10.40	12 50 9.94	53 25 12.4
12 51 18.2	8.7	52 2.14	51 27.2	16 54.15	-28.25	+0 0.34	+11.05	-1.38	-10.20	12 52 11.78	53 3 22.8
12 52 42.3	8.8	53 25.28	52 57.0	40 30.35	-22.58	+0 0.33	+11.61	-1.41	-10.30	12 53 34.80	53 39 52.9
12 54 40.6	7.0	55 22.70	55 0.8	7 51.35	-17.82	+0 0.34	+11.55	-1.41	-10.10	12 55 32.21	53 12 36.9
12 56 6.8	9.0	56 51.78	56 19.4	15 59.55	-26.21	+0 0.34	+10.98	-1.42	-10.00	12 57 1.24	53 4 20.0
12 58 0.4	8.7	58 43.54	58 11.4	12 52.65	-25.94	+0 0.34	+11.33	-1.43	- 9.95	12 58 52.93	53 7 27.7
12 59 30.3	8.5	0 13.40	59 44.1	11 32.40	-23.67	+0 0.34	+11.17	-1.44	- 9.90	13 0 22.73	53 8 50.3
13 0 38.9	8.3	1 20.22	0 55.3	44 17.00	-19.45	+0 0.33	+12.21	-1.46	-10.00	13 1 29.46	53 36 10.9
13 1 50.4	9.3	2 39.32	2 11.9	45 50.10	-22.93	+0 0.35	+ 9.46	-1.41	- 9.50	13 2 48.73	51 34 32.2
13 4 13.3	8.7	4 55.38	4 24.3	14 19.65	-25.15	+0 0.34	+11.55	-1.47	- 9.70	13 5 4.55	53 6 2.6
13 6 38.7	7.0	7 21.04	6 52.0	46 36.95	-23.74	+0 0.35	+10.62	-1.48	- 9.50	13 7 30.17	52 33 46.2
13 8 23.0	8.7	9 7.32	8 36.5	41 8.40	-24.59	+0 0.33	+11.66	-1.52	- 9.70	13 9 16.26	53 39 15.0
13 11 4.0	8.8	11 44.74	11 16.8	14 11.40	-22.57	+0 0.34	+11.57	-1.52	- 9.40	13 11 53.65	53 6 14.4
13 14 2.5	9.0	14 44.11	14 58.8	42 58.10	+11.74	+0 0.33	+12.13	-1.56	- 9.40	13 14 52.84	53 38 3.0
13 14 56.1	7.2	15 36.52	15 56.9	59 3.10	+16.40	+0 0.33	+11.94	-1.56	- 9.30	13 15 45.25	53 22 2.6
13 16 59.4	8.0	17 39.62	17 7.7	57 31.55	-25.02	+0 0.32	+12.61	-1.61	- 9.40	13 17 48.14	54 22 53.5
13 19 7.7	8.8	19 49.76	19 18.1	23 18.25	-25.13	+0 0.33	+12.31	-1.61	- 9.25	13 19 58.26	53 57 6.9
13 22 10.1	6.0	22 49.74	22 22.0	56 49.30	-22.25	+0 0.33	+11.51	-1.61	- 9.00	13 22 58.23	53 23 38.4
13 23 30.0	7.0	24 9.34	23 48.3	31 8.55	-16.69	+0 0.33	+11.99	-1.63	- 9.00	13 24 17.70	53 49 25.4
13 25 30.0	8.0	26 9.66	25 40.3	31 44.05	-23.38	+0 0.33	+11.94	-1.65	- 8.90	13 26 17.94	53 48 43.6
13 26 47.2	7.2	27 26.92	26 58.2	43 59.15	-22.38	+0 0.32	+13.15	-1.69	- 9.01	13 27 35.03	53 36 30.8
13 28 29.1	8.7	29 9.10	28 42.6	44 15.95	-21.68	+0 0.35	+11.11	-1.63	- 8.50	13 29 17.45	52 36 13.3
13 29 57.8	8.8	30 38.78	30 10.5	58 9.40	-22.74	+0 0.33	+11.69	-1.66	- 8.65	13 30 46.97	53 22 19.4
13 30 51.1	7.0	31 29.96	31 6.4	0 56.70	-18.98	+0 0.33	+11.34	-1.67	- 8.60	13 31 38.11	53 19 35.7
13 31 32.1	6.8	32 10.12	31 54.6	6 49.60	-12.50	+0 0.34	+11.48	-1.67	- 8.55	13 32 18.27	53 13 49.6
13 33 55.1	6.0	34 32.20	34 2.9	47 16.05	-23.45	+0 0.33	+11.77	-1.69	- 8.50	13 34 40.22	53 33 12.8
13 35 4.6	7.5	35 43.62	35 18.1	56 14.00	-20.48	+0 0.33	+11.44	-1.70	- 8.40	13 35 51.61	53 24 17.8
13 36 19.4	9.0	36 58.54	36 36.9	17 8.05	-17.48	+0 0.34	+11.28	-1.69	- 8.30	13 37 6.55	53 3 26.9
13 40 38.6	9.3	41 14.40	40 43.9	20 2.70	-23.55	+0 0.32	+12.95	-1.86	- 8.40	13 41 21.88	55 0 28.3
13 42 37.6	9.0	43 16.96	42 43.4	23 22.95	-27.27	+0 0.34	+11.22	-1.73	- 7.95	13 43 24.77	52 57 3.4
13 43 34.3	9.2	44 13.04	44 41.9	4 46.90	+23.28	+0 0.33	+11.82	-1.75	- 7.95	13 44 20.76	53 16 30.8
13 45 34.5	7.0	46 12.88	45 43.0	26 3.10	-23.72	+0 0.33	+11.95	-1.79	- 7.95	13 46 20.43	53 54 28.0
13 46 24.6	7.8	47 1.70	46 38.3	52 59.10	-18.76	+0 0.33	+11.83	-1.77	- 7.85	13 47 9.30	53 27 37.1

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.			Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.		R. A.	Dec.		
h m s		m s	m s	° "	"	m s	"		s	"	h m s	° ' "
13 47 53.9	7.5	48 30.54	48 2.7	24 10.90	-22.56	+0 0.34	+11.40	-1.76	--	7.80	13 48 38.18	52 56 21.3
13 49 6.8	9.5	49 45.96	49 23.6	25 13.15	-18.60	+0 0.36	+ 9.75	-1.73	--	7.40	13 49 53.73	51 55 22.0
13 56 47.6	9.0	57 23.58	56 53.0	15 43.40	-24.18	+0 0.33	+12.04	-1.86	--	7.40	13 57 30.73	54 4 49.7
13 59 13.4	7.2	59 49.36	59 24.0	19 40.55	-20.58	+0 0.34	+11.60	-1.83	--	7.10	13 59 56.61	53 0 56.4
14 1 31.0	7.5	2 7.32	1 40.2	26 14.60	-21.51	+0 0.33	+11.99	-1.88	--	7.15	14 2 14.33	53 54 22.2
14 4 27.5	8.8	5 4.34	4 28.0	51 34.90	-28.40	+0 0.32	+12.50	-1.92	--	7.05	14 5 11.14	54 28 56.1
14 5 32.4	8.7	6 9.20	5 39.9	22 58.80	-23.22	+0 0.33	+12.32	-1.90	--	6.90	14 6 16.07	53 57 37.6
14 6 30.9	9.5	7 7.32	6 53.7	15 21.75	-11.00	+0 0.34	+11.12	-1.87	--	6.70	14 7 14.33	53 5 26.0
14 7 45.7	8.8	8 21.82	7 54.7	2 9.05	-21.81	+0 0.33	+11.49	-1.89	--	6.70	14 8 28.74	53 18 28.6
14 10 11.8	6.8	10 47.32	10 18.1	13 32.65	-23.61	+0 0.34	+11.46	-1.89	--	6.55	14 10 54.21	53 7 3.7
14 11 8.5	8.7	11 42.70	11 16.5	49 35.50	-20.98	+0 0.33	+12.14	-1.91	--	6.55	14 11 49.48	53 31 4.3
14 11 42.7	....	12 19.82	12 28.0	30 35.00	+ 6.52	+0 0.33	+12.02	-1.93	--	6.60	14 12 26.51	53 50 32.3
14 14 27.2	8.8	15 2.68	14 39.2	22 6.40	-19.06	+0 0.34	+11.19	-1.91	--	6.30	14 15 9.46	52 58 35.3
14 17 26.0	9.5	18 3.80	17 36.7	28 30.15	-22.54	+0 0.35	+10.17	-1.88	--	5.90	14 18 10.70	51 52 8.0
14 20 2.6	8.9	20 36.92	20 13.1	42 23.00	-19.01	+0 0.33	+11.93	-1.97	--	6.10	14 20 43.38	53 38 20.8
14 21 37.3	8.0	22 12.64	21 48.6	9 26.35	-19.37	+0 0.34	+11.75	-1.95	--	5.90	14 22 19.16	53 11 17.4
14 22 42.7	8.7	23 16.98	22 52.7	10 39.25	-19.62	+0 0.34	+11.12	-1.96	--	5.90	14 23 23.47	53 10 3.8
14 23 27.9	9.0	24 2.22	23 49.2	0 56.95	-10.46	+0 0.33	+11.44	-1.97	--	5.80	14 24 8.64	53 19 55.9
14 28 47.1	7.5	29 18.30	28 53.8	53 48.65	-19.65	+0 0.33	+11.93	-2.00	--	5.50	14 29 24.55	53 26 56.9
ZONE 72, MAY 26, 1871.												
13 49 47.5	8.8	50 26.70	49 59.8	41 12.60	-22.97	+0 0.14	+ 8.46	-1.68	--	7.40	13 50 34.42	50 39 16.6
13 52 4.9	8.5	52 43.00	52 17.6	2 12.40	-21.85	+0 0.15	+ 8.25	-1.68	--	7.20	13 52 50.71	50 18 18.3
13 55 23.4	8.0	56 0.14	55 33.3	15 55.80	-23.16	+0 0.15	+ 7.79	-1.69	--	7.00	13 56 7.79	50 4 33.9
13 58 58.4	9.0	59 35.00	59 6.7	21 55.35	-24.51	+0 0.15	+ 7.83	-1.71	--	6.80	13 59 42.56	49 58 33.8
14 2 51.5	....	3 29.60	3 2.4	17 33.90	-23.53	+0 0.15	+ 8.04	-1.73	--	6.60	14 3 37.03	50 2 57.3
14 5 44.2	9.2	6 19.40	5 52.6	30 27.65	-22.80	+0 0.13	+ 8.53	-1.77	--	6.65	14 6 26.61	50 50 5.3
14 5 44.2	9.0	6 20.30	5 56.0	30 27.65	-20.67	+0 0.13	+ 8.58	-1.77	--	6.65	14 6 27.51	50 50 7.4
14 10 53.8	7.8	11 29.62	11 4.5	36 0.80	-21.42	+0 0.13	+ 8.58	-1.79	--	6.30	14 11 36.69	50 44 34.9
14 13 10.6	8.8	13 46.84	13 15.2	56 16.15	-27.13	+0 0.14	+ 8.11	-1.79	--	6.15	14 13 53.91	50 24 13.9
14 15 25.6	8.9	16 3.36	15 39.6	55 55.35	-20.43	+0 0.14	+ 8.17	-1.81	--	6.05	14 16 10.36	50 24 42.0
14 18 22.9	7.0	18 59.26	18 30.6	22 8.85	-24.86	+0 0.14	+ 7.88	-1.81	--	5.83	14 19 6.25	49 58 24.6
14 21 7.2	9.0	21 42.86	21 17.5	34 40.15	-21.64	+0 0.13	+ 9.16	-1.85	--	5.80	14 21 49.63	50 45 58.4
14 23 37.6	....	24 10.30	23 46.7	56 21.85	-20.26	+0 0.14	+ 8.24	-1.84	--	5.60	14 24 17.08	50 24 17.8
14 26 45.0	9.0	27 21.16	26 49.2	12 16.05	-27.63	+0 0.14	+ 7.99	-1.85	--	5.40	14 27 27.90	50 8 16.9
14 29 16.8	8.7	29 50.08	29 26.0	46 23.25	-20.62	+0 0.13	+ 8.45	-1.88	--	5.35	14 29 56.66	50 34 17.7
14 37 22.6	9.2	37 56.34	37 33.1	41 54.15	-19.81	+0 0.13	+ 8.63	-1.92	--	4.95	14 38 2.69	50 38 50.0
14 40 54.4	9.0	41 28.34	41 1.6	36 6.90	-22.76	+0 0.13	+ 8.56	-1.93	--	4.70	14 41 34.59	50 44 35.2
14 43 44.7	9.1	44 19.50	43 52.9	4 53.25	-22.90	+0 0.14	+ 8.62	-1.93	--	4.50	14 44 25.77	50 15 49.7
14 46 44.8	9.0	47 18.90	46 48.5	41 21.80	-25.96	+0 0.13	+ 8.44	-1.96	--	4.40	14 47 25.01	50 39 18.7
14 51 4.0	8.8	51 38.84	51 10.4	43 2.00	-24.26	+0 0.12	+ 8.73	-1.97	--	4.10	14 51 44.84	50 37 41.8
14 53 35.8	7.8	54 8.34	53 44.8	44 32.20	-20.08	+0 0.12	+ 9.00	-1.98	--	3.95	14 54 14.28	50 36 16.8
14 57 21.8	8.4	57 54.62	57 27.6	40 2.55	-23.08	+0 0.12	+ 8.30	-2.00	--	3.75	14 58 0.46	50 40 43.9
ZONE 73, MAY 27, 1871.												
13 28 19.4	9.5	28 59.62	28 36.9	30 16.15	-19.31	-0 0.08	+ 8.91	-1.54	--	8.60	13 29 7.80	50 50 12.5
13 36 27.4	....	37 7.90	36 40.0	7 52.10	-24.05	+0 0.11	+ 8.54	-1.57	--	8.10	13 37 16.09	50 12 33.1
13 40 20.5	9.8	41 0.90	40 34.9	22 30.45	-22.53	+0 0.11	+ 8.27	-1.59	--	7.90	13 41 8.99	49 57 56.8
13 43 32.5	8.8	44 11.94	43 37.8	18 51.90	-29.51	+0 0.11	+ 8.42	-1.61	--	7.80	13 44 19.92	50 1 29.1
13 46 51.8	9.2	47 31.22	47 6.2	42 21.65	-21.36	+0 0.10	+ 8.99	-1.65	--	7.75	13 47 39.01	50 38 8.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	' "
13 49 47.5	9.0	50 26.86	50 2.5	41 14.50	-20.84	+0 0.10	+ 8.83	-1.67	- 7.60	13 50 34.55	50 39 16.7
13 52 4.9	8.7	52 43.00	52 15.9	2 12.10	-23.32	+0 0.11	+ 8.54	-1.67	- 7.40	13 52 50.68	50 18 17.0
13 55 23.4	8.5	56 0.20	55 32.4	15 55.40	-24.03	+0 0.11	+ 8.09	-1.68	- 7.20	13 56 7.82	50 4 33.3
13 58 58.4	...	59 35.16	59 8.4	21 56.55	-23.21	+0 0.11	+ 8.16	-1.69	- 7.00	13 59 42.70	49 58 32.8
14 2 51.5	6.0	3 29.64	3 3.3	17 33.55	-22.75	+0 0.10	+ 8.34	-1.72	- 6.85	14 3 37.03	50 2 58.3
14 5 44.2	9.2	6 19.22	5 43.1	30 19.15	-30.71	+0 0.09	+ 8.70	-1.76	- 6.90	14 6 26.40	50 50 5.6
14 5 44.2	9.0	6 20.38	5 50.5	30 19.15	-25.44	+0 0.09	+ 8.81	-1.76	- 6.90	14 6 27.56	50 50 10.9
14 13 10.6	9.0	13 47.00	13 21.9	56 22.05	-21.55	+0 0.10	+ 8.55	-1.78	- 6.40	14 13 54.04	50 24 13.6
14 15 25.6	8.8	16 3.42	15 41.6	55 58.05	-18.71	+0 0.10	+ 8.54	-1.79	- 6.30	14 16 10.40	50 24 40.9
14 18 22.9	7.0	18 59.34	18 29.2	22 8.30	-26.07	+0 0.10	+ 8.17	-1.80	- 6.10	14 19 6.30	49 58 23.8
14 21 7.2	9.0	21 42.82	21 10.2	34 33.75	-27.77	+0 0.09	+ 9.37	-1.84	- 6.05	14 21 49.56	50 45 58.4
14 23 37.6	6.0	24 10.26	23 46.4	56 21.20	-20.52	+0 0.10	+ 8.56	-1.84	- 5.85	14 24 17.00	50 24 18.1
14 26 45.0	8.9	27 21.16	26 48.6	12 13.95	-28.15	+0 0.10	+ 8.27	-1.84	- 5.70	14 27 27.87	50 8 18.2
14 29 16.8	8.7	29 50.14	29 21.6	46 18.75	-24.38	+0 0.09	+ 8.70	-1.87	- 5.60	14 29 56.69	50 34 18.3
14 31 27.0	8.0	32 1.44	31 40.8	16 33.60	-17.81	+0 0.10	+ 8.28	-1.86	- 5.40	14 32 8.03	50 4 10.2
14 37 22.6	9.5	37 56.38	37 33.0	41 56.05	-19.99	+0 0.09	+ 8.96	-1.91	- 5.15	14 38 2.70	50 38 47.8
14 40 54.4	9.2	41 28.32	40 56.9	36 4.20	-26.76	+0 0.09	+ 8.82	-1.92	- 4.95	14 41 34.54	50 44 33.7
14 43 44.7	9.3	44 19.60	43 54.4	4 53.20	-21.78	+0 0.10	+ 8.96	-1.92	- 4.75	14 44 25.84	50 15 50.7
14 46 44.8	9.1	47 19.00	46 59.1	41 32.00	-17.00	+0 0.09	+ 8.94	-1.95	- 4.60	14 47 25.08	50 39 17.5
14 53 35.8	8.0	54 8.50	53 38.2	44 26.40	-25.91	+0 0.09	+ 9.20	-1.97	- 4.25	14 54 14.42	50 36 16.5
14 57 21.8	8.7	57 54.78	57 25.9	40 0.30	-24.67	+0 0.09	+ 9.41	-1.99	- 4.00	14 58 0.60	50 40 45.2
ZONE 74, MAY 29, 1871.											
12 52 42.3	8.8	53 25.54	52 59.9	40 30.70	-20.43	+0 0.09	+11.38	-1.33	-11.00	12 53 34.90	53 39 53.1
12 54 40.6	7.0	55 22.76	54 49.2	7 39.90	-27.10	+0 0.09	+11.16	-1.33	-10.80	12 55 32.10	53 12 37.4
12 56 6.8	8.7	56 51.98	56 22.0	15 59.00	-24.27	+0 0.10	+10.81	-1.34	-10.75	12 57 1.28	53 4 21.0
12 58 0.4	8.2	58 43.70	58 5.1	12 44.95	-31.19	+0 0.10	+10.96	-1.35	-10.70	12 58 52.93	53 7 28.5
12 59 30.3	8.5	0 13.60	59 43.9	11 28.85	-23.99	+0 0.09	+10.97	-1.37	-10.60	13 0 22.75	53 8 52.0
13 0 38.9	8.8	1 20.54	0 58.0	44 17.35	-17.98	+0 0.09	+11.97	-1.39	-10.70	13 1 29.61	53 36 10.5
13 1 50.4	9.1	2 39.46	2 9.2	45 44.00	-25.36	+0 0.12	+ 9.21	-1.34	-10.20	13 2 48.71	51 34 34.3
13 4 13.3	7.5	4 55.48	4 17.3	14 10.05	-30.89	+0 0.10	+11.20	-1.40	-10.40	13 5 4.48	53 6 4.8
13 6 38.7	6.8	7 21.08	7 10.8	46 48.80	- 8.43	+0 0.11	+10.63	-1.41	-10.20	13 7 30.04	52 33 48.4
13 8 23.0	8.7	9 7.52	8 33.2	41 4.30	-27.38	+0 0.09	+11.33	-1.45	-10.40	13 9 16.29	53 39 14.6
13 11 4.0	9.0	11 45.00	11 9.9	14 3.55	-28.39	+0 0.10	+11.25	-1.45	-10.20	13 11 53.74	53 6 14.7
13 14 2.5	8.8	14 44.14	14 11.6	42 19.15	-25.96	+0 0.09	+11.55	-1.49	-10.20	13 14 52.70	53 38 2.2
13 14 56.1	7.5	15 36.52	15 23.6	58 33.05	-10.37	+0 0.09	+11.70	-1.49	-10.10	13 15 45.08	53 22 4.2
13 16 59.4	8.7	17 39.58	17 3.1	57 25.55	-28.63	+0 0.07	+12.24	-1.53	-10.20	13 17 47.93	54 22 54.2
13 19 7.7	8.7	19 49.82	19 16.2	23 13.75	-26.63	+0 0.08	+11.99	-1.54	-10.05	13 19 58.14	53 57 8.1
13 22 10.1	6.8	22 49.60	22 13.4	56 39.20	-29.07	+0 0.09	+11.15	-1.54	- 9.80	13 22 57.92	53 23 39.9
13 23 30.0	7.7	24 9.30	23 43.1	31 3.05	-20.82	+0 0.08	+11.49	-1.56	- 9.80	13 24 17.48	53 49 24.9
13 25 30.0	9.0	26 9.60	25 24.8	31 28.55	-35.63	+0 0.08	+11.35	-1.58	- 9.75	13 26 17.70	53 48 44.8
13 26 47.2	6.8	27 26.84	26 59.2	43 57.15	-22.53	+0 0.07	+12.87	-1.62	- 9.82	13 27 34.77	54 36 30.9
13 28 29.1	8.9	29 9.04	28 33.9	44 4.95	-28.72	+0 0.11	+10.76	-1.56	- 9.60	13 29 17.22	52 36 15.2
13 29 57.8	8.1	30 38.72	30 11.7	58 6.45	-21.69	+0 0.09	+11.52	-1.60	- 9.50	13 30 46.73	53 22 21.8
13 30 51.1	6.5	31 29.88	31 10.8	0 57.70	-15.36	+0 0.09	+11.20	-1.60	- 9.40	13 31 37.86	53 19 36.8
13 31 32.1	7.0	32 10.10	32 9.8	6 57.90	- 0.09	+0 0.09	+11.38	-1.60	- 9.35	13 32 18.07	53 13 52.2
13 33 55.1	6.3	34 32.28	33 54.0	47 5.45	-30.65	+0 0.09	+11.33	-1.63	- 9.30	13 34 40.12	53 33 14.4
13 35 4.6	7.7	35 43.55	35 18.8	56 10.75	-19.84	+0 0.09	+11.26	-1.63	- 9.25	13 35 51.37	53 24 20.0
13 42 37.6	9.0	43 17.16	42 58.2	23 32.10	-15.34	+0 0.10	+11.25	-1.67	- 8.80	13 43 24.79	52 57 4.7
13 43 34.3	9.2	44 13.30	44 3.4	4 12.80	- 7.98	+0 0.09	+11.73	-1.68	- 8.80	13 44 20.85	53 16 32.0
13 45 34.5	6.8	46 12.98	45 49.8	26 6.25	-18.40	+0 0.08	+11.78	-1.72	- 8.80	13 46 20.35	53 54 28.5
13 46 24.6	7.8	47 1.68	47 0.7	53 14.25	- 0.80	+0 0.09	+11.81	-1.71	- 8.70	13 47 9.10	53 27 38.4
13 47 53.9	7.5	48 30.60	48 4.7	24 11.45	-21.02	+0 0.10	+11.25	-1.70	- 8.60	13 48 38.06	52 56 20.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
13 49 6.8	9.4	49 46.24	49 31.3	25 18.05	-12.38	+0 0.12	+ 9.71	-1.68	- 8.40	13 49 53.82	51 55 21.7
13 50 28.9	9.8	51 7.62	50 44.7	9 18.65	-18.48	+0 0.09	+11.58	-1.73	- 8.50	13 51 14.94	53 11 16.9
13 53 36.5	7.8	54 13.56	53 47.2	37 42.35	-21.04	+0 0.09	+11.78	-1.76	- 8.40	13 54 20.70	53 42 51.5
13 54 45.6	9.0	55 22.54	55 4.7	48 30.60	-14.25	+0 0.09	+11.86	-1.77	- 8.35	13 55 29.66	53 32 10.4
13 56 47.6	9.0	57 23.76	56 45.6	15 34.55	-30.18	+0 0.08	+11.63	-1.80	- 8.30	13 57 30.72	54 4 50.6
13 59 13.4	7.8	59 49.30	59 17.8	19 32.55	-25.53	+0 0.10	+11.28	-1.77	- 8.00	13 59 56.37	53 0 57.7
14 1 31.0	7.0	2 7.32	1 25.3	25 58.85	-33.33	+0 0.08	+11.44	-1.82	- 8.05	14 2 14.14	53 54 24.1
14 4 27.5	9.0	5 4.40	4 38.8	51 40.05	-20.03	+0 0.07	+12.44	-1.86	- 8.00	14 5 11.01	54 28 57.7
14 5 32.4	7.8	6 9.34	5 46.9	23 1.60	-17.75	+0 0.08	+12.16	-1.85	- 7.90	14 6 16.01	53 57 38.5
14 6 30.9	9.8	7 7.58	6 58.1	15 22.40	- 7.69	+0 0.10	+10.95	-1.82	- 7.70	14 7 14.40	53 5 26.9
14 7 45.7	8.7	8 21.94	7 50.9	2 4.95	-24.94	+0 0.09	+11.23	-1.84	- 7.65	14 8 28.67	53 18 27.7
14 10 11.8	6.5	10 47.36	10 22.7	13 32.90	-19.89	+0 0.10	+11.35	-1.84	- 7.50	14 10 54.00	53 7 5.5
14 11 8.5	8.7	11 42.88	11 24.5	49 38.80	-14.74	+0 0.09	+12.01	-1.86	- 7.50	14 11 49.47	53 31 5.6
14 11 42.7	8.0	12 19.82	12 15.9	30 22.95	- 3.10	+0 0.08	+11.75	-1.88	- 7.55	14 12 26.31	53 50 32.9
14 13 41.7	8.0	14 17.70	13 44.9	49 33.15	-25.59	+0 0.07	+12.36	-1.92	- 7.55	14 14 23.99	54 31 1.2
14 14 27.2	8.9	15 2.70	14 53.7	22 16.75	- 7.30	+0 0.10	+12.15	-1.86	- 7.25	14 15 9.29	52 58 36.1
14 15 53.2	9.3	16 28.12	15 55.5	11 14.70	-26.94	+0 0.12	+ 9.84	-1.84	- 7.10	14 16 34.83	52 9 16.6
14 17 26.0	9.6	18 4.14	17 48.1	28 37.35	-13.31	+0 0.11	+10.17	-1.84	- 6.90	14 18 10.84	51 52 8.5
14 20 2.6	8.7	20 36.98	20 1.7	42 10.40	-28.19	+0 0.09	+11.49	-1.92	- 7.10	14 20 43.25	53 38 22.2
14 21 37.3	8.3	22 12.60	21 31.3	9 9.70	-33.34	+0 0.09	+11.25	-1.91	- 6.90	14 22 18.91	53 11 18.0
14 22 42.7	8.7	23 17.00	22 43.5	10 28.00	-27.05	+0 0.09	+10.80	-1.92	- 6.85	14 23 23.28	53 10 5.8
14 23 27.9	9.2	24 2.48	23 53.2	0 57.45	- 7.48	+0 0.09	+11.30	-1.92	- 6.80	14 24 8.71	51 19 56.6
14 25 48.8	9.6	26 24.12	26 0.8	59 34.35	-19.60	+0 0.12	+10.07	-1.87	- 6.40	14 26 30.67	51 21 7.3
14 28 47.1	6.9	29 18.30	28 45.0	53 39.35	-26.71	+0 0.09	+11.61	-1.96	- 6.50	14 29 24.35	53 26 57.2
ZONE 75, JUNE 2, 1871.											
13 25 30.0	8.8	26 9.80	25 54.2	32 22.00	-12.12	-0 0.14	+12.22	-1.51	-10.50	13 26 17.75	53 48 42.7
13 26 52.7	9.0	27 33.18	27 49.7	47 12.15	+12.90	-0 0.13	+11.93	-1.51	-10.40	13 27 41.12	53 34 17.6
13 29 57.8	9.0	30 39.00	30 16.3	58 40.35	-17.82	-0 0.13	+11.85	-1.53	-10.20	13 36 46.86	53 22 19.2
13 33 55.1	6.5	34 32.60	34 10.0	47 49.05	-17.67	-0 0.13	+11.93	-1.56	-10.10	13 34 40.29	53 33 11.4
13 35 25.6	8.7	36 4.28	36 15.6	39 8.90	+ 8.59	-0 0.16	+13.47	-1.61	-10.25	13 36 11.72	54 42 19.4
13 37 49.0	8.9	38 27.62	38 0.6	57 50.70	-21.18	-0 0.15	+12.74	-1.61	-10.10	13 38 35.04	54 23 7.6
13 41 11.7	8.5	41 48.66	41 25.1	17 40.20	-17.71	-0 0.17	+13.51	-1.66	-10.10	13 41 55.83	55 3 27.7
13 45 34.5	8.2	46 13.16	45 43.7	26 30.10	-22.87	-0 0.14	+12.01	-1.65	- 9.60	13 46 20.35	53 54 27.4
13 47 53.9	7.0	48 30.88	48 7.3	24 43.25	-18.72	-0 0.12	+11.54	-1.64	- 9.40	13 48 38.18	52 56 18.5
13 53 36.5	8.0	54 13.78	53 45.1	38 10.35	-22.43	-0 0.14	+12.07	-1.70	- 9.25	13 54 20.75	53 42 49.3
13 56 47.6	9.3	57 24.04	56 54.6	16 12.05	-22.70	-0 0.14	+12.13	-1.74	- 9.20	13 57 30.84	54 4 48.0
13 59 13.4	7.8	59 49.58	59 21.7	20 3.35	-22.09	-0 0.12	+10.83	-1.72	- 8.90	13 59 56.48	53 0 56.7
14 1 31.0	8.0	2 7.66	1 48.2	26 46.95	-15.12	-0 0.14	+12.18	-1.76	- 9.00	14 2 14.32	53 54 21.8
14 6 16.0	9.1	6 54.08	6 27.2	1 22.30	-21.14	-0 0.13	+11.38	-1.77	- 8.60	14 7 0.69	53 19 40.8
14 8 16.6	9.5	9 1.86	8 41.2	15 36.65	-16.36	-0 0.12	+11.08	-1.78	- 8.50	14 9 8.45	53 5 31.5
14 10 11.8	7.8	10 47.46	10 26.9	14 6.20	-16.27	-0 0.12	+11.66	-1.79	- 8.40	14 10 53.99	53 7 3.0
14 13 41.7	8.5	14 18.02	13 53.4	50 9.75	-18.87	-0 0.16	+12.52	-1.86	- 8.45	14 14 24.14	54 30 58.3
14 16 36.2	8.9	17 9.58	16 46.2	53 4.05	-17.90	-0 0.15	+12.91	-1.88	- 8.30	14 17 15.62	54 28 6.2
14 16 36.2	9.0	17 11.16	16 47.2	53 4.05	-16.22	-0 0.15	+12.94	-1.88	- 8.30	14 17 17.20	54 28 7.9
14 20 2.6	9.0	20 37.04	20 7.9	42 45.75	-22.71	-0 0.14	+11.93	-1.87	- 8.00	14 20 43.13	53 38 19.6
14 22 1.8	9.3	22 38.50	22 14.6	18 18.30	-18.91	-0 0.12	+11.44	-1.86	- 7.80	14 22 44.67	53 2 51.0
14 24 15.2	9.0	24 48.76	24 20.6	6 53.60	-21.69	-0 0.15	+12.42	-1.91	- 7.90	14 24 54.60	54 14 14.2
14 27 23.1	8.9	27 57.12	27 30.0	26 14.55	-21.01	-0 0.14	+11.99	-1.92	- 7.70	14 28 2.93	53 54 54.4
14 30 59.8	9.2	31 33.90	31 10.7	22 48.95	-18.39	-0 0.12	+11.28	-1.91	- 7.30	14 31 39.80	52 58 23.1
14 33 17.1	8.5	33 48.92	33 28.4	46 8.50	-16.02	-0 0.14	+11.73	-1.94	- 7.30	14 33 54.62	53 35 6.9
14 36 38.8	8.7	37 12.08	36 45.8	10 18.10	-20.74	-0 0.13	+11.06	-1.94	- 7.10	14 37 17.77	53 10 52.8
14 39 48.0	8.9	40 19.42	39 55.3	30 6.65	-18.26	-0 0.16	+12.88	-2.03	- 7.20	14 40 24.63	54 51 9.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.			Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.		R. A.	Dec.		
h m s		m s	m s	° "	"	" m s			s "		h m s	° ' "
14 42 54.1	8.7	43 26.38	42 54.9	0 19.80	-24.75	-0 0.13	+11.16	-1.98	-6.80		14 43 31.85	53 20 48.9
14 45 39.0	8.5	46 11.30	45 44.4	25 35.45	-21.34	-0 0.12	+10.85	-1.98	-6.50		14 46 16.80	52 55 37.3
14 47 33.7	8.2	48 6.04	47 41.1	15 15.00	-19.68	-0 0.11	+10.98	-1.99	-6.45		14 48 11.46	53 6 0.0
14 49 34.9	9.0	50 6.98	49 50.2	28 26.70	-13.03	-0 0.13	+12.43	-2.04	-6.40		14 50 12.15	53 52 56.9
14 52 31.9	8.8	53 2.76	52 39.6	27 41.15	-17.99	-0 0.13	+12.27	-2.05	-6.30		14 53 7.84	53 53 38.2
14 54 35.0	9.2	55 6.60	.....	.....	.....	-0 0.12	.....	-2.04	.....		14 55 11.77	.....
ZONE 76, JUNE 3, 1871.												
13 17 14.9	8.0	17 56.14	17 28.7	16 58.90	-22.66	-0 0.14	+ 8.93	-1.35	-10.40		13 18 4.73	51 3 50.2
13 18 40.4	8.6	19 20.94	18 54.5	33 8.40	-21.49	-0 0.16	+ 9.91	-1.38	-10.50		13 19 29.38	51 47 42.9
13 18 54.6	8.8	19 37.02	19 55.2	34 47.50	+14.81	-0 0.16	+10.29	-1.38	-10.50		13 19 45.48	51 46 40.5
13 20 8.2	8.8	20 49.40	20 29.0	3 52.85	-16.79	-0 0.15	+ 9.55	-1.38	-10.30		13 20 57.85	51 17 3.2
13 22 1.4	8.9	22 42.44	22 16.1	14 45.45	-21.74	-0 0.14	+ 9.47	-1.39	-10.20		13 22 50.86	51 6 5.8
13 22 47.8	7.0	23 28.66	23 7.3	58 48.80	-17.59	-0 0.15	+ 9.61	-1.40	-10.30		13 23 37.01	51 22 6.8
13 25 2.4	9.0	25 43.54	25 16.1	4 24.65	-22.56	-0 0.15	+ 9.55	-1.41	-10.15		13 25 51.83	51 16 26.4
13 27 34.5	8.9	28 14.56	27 47.8	34 43.90	-21.83	-0 0.16	+10.12	-1.44	-10.20		13 28 22.70	51 46 8.7
13 28 29.1	8.7	29 9.20	28 55.7	44 50.75	-10.79	-0 0.07	+10.14	-1.45	-10.10		13 29 17.31	52 36 13.1
13 30 49.0	7.9	31 28.48	31 3.5	24 58.25	-20.29	-0 0.16	+10.36	-1.47	-10.10		13 31 36.48	51 55 56.6
13 31 54.1	6.5	32 34.34	32 9.8	59 58.90	-20.14	-0 0.16	+ 9.75	-1.47	-9.90		13 32 42.37	51 20 55.9*
13 32 55.2	9.5	33 35.44	33 28.6	7 7.30	-5.48	-0 0.17	+10.33	-1.49	-10.00		13 33 43.32	52 14 2.8
13 34 56.9	8.5	35 36.96	35 12.2	54 35.50	-16.16	-0 0.15	+ 9.78	-1.49	-9.80		13 35 44.88	51 26 23.8
13 36 12.4	8.7	36 51.58	36 25.2	48 57.25	-21.62	-0 0.16	+ 9.80	-1.50	-9.80		13 36 59.44	51 31 56.8
13 37 34.0	9.2	38 14.36	37 48.1	8 24.60	-21.68	-0 0.15	+ 9.34	-1.50	-9.65		13 38 22.23	51 12 29.3
13 38 22.4	9.0	39 5.02	38 48.5	31 52.40	-13.43	-0 0.16	+ 9.82	-1.52	-9.75		13 39 12.78	51 49 10.2
13 40 38.6	9.2	41 14.66	40 44.0	20 27.40	-23.22	-0 0.24	+12.72	-1.64	-10.30		13 41 21.80	55 0 28.1
13 41 11.7	6.5	41 48.52	41 31.2	17 37.55	-13.04	-0 0.24	+13.30	-1.64	-10.30		13 41 55.64	55 3 28.8
13 44 14.8	8.7	44 51.26	44 23.4	22 34.80	-21.07	-0 0.24	+13.09	-1.66	-10.10		13 44 58.27	54 58 24.0
13 45 30.7	8.8	46 9.92	45 46.1	58 35.25	-19.55	-0 0.15	+ 9.56	-1.56	-9.40		13 46 17.51	51 22 22.4
13 46 47.2	8.7	47 25.40	47 1.0	24 52.95	-20.24	-0 0.14	+ 9.33	-1.56	-9.25		13 47 33.01	50 56 4.1
13 48 7.3	9.0	48 47.64	48 28.2	33 53.35	-15.80	-0 0.16	+10.10	-1.59	-9.35		13 48 55.07	51 47 9.1
13 50 2.9	8.8	50 41.16	50 18.5	31 3.50	-18.46	-0 0.16	+ 9.64	-1.60	-9.30		13 50 48.53	51 49 56.2
13 51 38.7	8.0	52 16.18	51 50.5	12 2.60	-21.22	-0 0.14	+ 9.04	-1.59	-9.10		13 52 23.61	51 8 54.2
13 53 52.2	8.7	54 29.72	54 1.2	0 33.55	-23.43	-0 0.15	+ 8.97	-1.61	-9.00		13 54 37.04	51 20 21.4
13 54 48.2	9.0	55 27.54	55 5.9	40 55.00	-17.24	-0 0.17	+10.44	-1.66	-9.20		13 55 34.61	52 40 7.6
13 56 39.9	9.8	57 18.10	57 2.6	50 14.05	-12.41	-0 0.17	+10.25	-1.66	-9.10		13 57 25.14	52 30 53.6
13 57 37.5	6.5	58 13.52	58 30.7	47 9.05	+13.43	-0 0.16	+ 9.64	-1.64	-8.90		13 58 20.68	51 34 24.2
14 9 23.3	9.4	10 2.00	9 39.5	59 54.20	-18.50	-0 0.15	+ 9.78	-1.71	-8.30		14 10 8.84	51 21 9.9
14 10 29.7	7.2	11 6.18	10 44.5	46 46.05	-17.75	-0 0.15	+ 9.51	-1.72	-8.30		14 11 12.95	51 34 18.8
14 11 53.2	8.0	12 28.76	12 4.1	46 42.40	-20.21	-0 0.15	+ 9.46	-1.73	-8.20		14 12 35.48	51 34 20.7
14 13 44.0	9.3	14 20.42	13 53.0	29 7.60	-22.27	-0 0.16	+10.12	-1.75	-8.20		14 14 27.03	51 51 54.1
14 15 20.8	8.8	15 57.40	15 26.8	6 1.80	-24.66	-0 0.18	+ 9.93	-1.77	-8.20		14 16 3.87	52 14 57.6
14 15 20.8	8.8	15 58.25	16 14.4	6 1.80	+13.05	-0 0.18	+10.13	-1.77	-8.20		14 16 4.72	52 15 35.5
14 16 55.5	8.2	17 30.14	17 11.3	40 19.60	-15.34	-0 0.17	+ 9.40	-1.77	-8.25		14 17 36.66	51 40 48.9
14 17 26.0	9.0	18 4.06	18 15.8	29 25.85	+ 9.51	-0 0.17	+10.32	-1.78	-8.05		14 18 10.54	51 52 8.7
14 19 59.4	8.5	20 34.82	20 16.8	50 43.40	-14.74	-0 0.16	+ 9.29	-1.78	-7.90		14 20 41.30	51 30 26.5
14 21 43.4	9.0	22 17.84	22 52.9	2 5.35	+28.89	-0 0.16	+ 9.06	-1.78	-7.70		14 22 24.30	51 19 48.5
14 21 43.4	9.0	22 19.03	21 50.8	2 59.45	-23.20	-0 0.16	+ 9.38	-1.78	-7.70		14 22 25.49	51 18 2.6
14 24 25.3	9.0	25 2.34	24 44.7	34 59.55	-14.65	-0 0.15	+ 8.42	-1.78	-7.50		14 25 8.82	50 46 10.9
14 26 45.0	8.4	27 21.36	26 57.1	12 47.25	-20.50	-0 0.14	+ 8.15	-1.77	-7.30		14 27 27.90	50 8 17.7
14 28 41.8	8.9	29 16.98	28 52.9	52 17.05	-19.75	-0 0.16	+ 9.43	-1.82	-7.45		14 29 23.21	51 28 50.2
14 31 34.3	7.3	32 7.16	31 53.9	33 6.25	-10.83	-0 0.17	+10.03	-1.85	-7.35		14 32 13.24	51 48 11.2
14 33 36.7	8.9	34 13.32	33 52.6	43 16.60	-16.91	-0 0.17	+ 9.83	-1.86	-7.20		14 34 19.37	51 37 55.2
14 34 41.7	8.3	35 16.06	34 59.9	48 34.95	-13.26	-0 0.17	+ 9.85	-1.86	-7.20		14 35 22.10	51 32 40.8

R. A. 1855.0 According to B. D.	Obs. Magn	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	[′] [″]	[″]	^m ^s	[″]	^s	[″]	^m ^s	[°] [′] [″]
14 35 37.8	9.0	36 11.84	35 51.8	50 27.50	-16.38	-0 0.16	+ 9.24	-1.86	- 7.10	14 36 17.87	51 30 44.8
14 37 17.2	7.8	37 49.52	37 22.0	48 51.35	-22.02	-0 0.18	+10.74	-1.91	- 7.20	14 37 55.28	52 32 17.1
14 39 1.8	8.5	39 35.86	39 11.2	12 31.05	-20.39	-0 0.15	+ 9.13	-1.87	- 6.90	14 39 41.87	51 8 38.1
14 44 50.7	6.8	45 23.26	44 56.6	27 36.60	-21.71	-0 0.15	+ 8.87	-1.90	- 6.55	14 45 28.99	51 53 32.6
14 45 54.7	8.8	46 28.90	46 13.5	31 45.65	-12.53	-0 0.17	+ 9.82	-1.92	- 6.60	14 46 34.58	51 49 33.9
14 48 21.3	8.7	48 57.98	48 29.1	11 55.35	-23.87	-0 0.15	+ 8.94	-1.92	- 6.40	14 49 3.73	51 9 12.8
14 50 0.3	9.0	50 36.36	50 1.9	12 31.60	-28.50	-0 0.15	+ 8.95	-1.92	- 6.30	14 50 42.08	51 8 32.4
14 50 0.3	9.2	50 37.96	50 20.3	12 31.60	-14.62	-0 0.15	+ 9.20	-1.92	- 6.30	14 50 43.68	51 8 46.5
14 51 4.0	8.3	51 38.90	51 24.9	43 40.40	-11.69	-0 0.14	+ 8.92	-1.91	- 6.15	14 51 44.70	50 37 40.7
14 52 50.7	8.8	53 23.55	52 59.1	59 56.65	-20.06	-0 0.16	+ 9.73	-1.95	- 6.00	14 53 29.14	51 21 17.5
14 55 55.8	7.8	56 29.80	56 3.0	16 50.50	-22.17	-0 0.15	+ 8.91	-1.95	- 5.95	14 56 35.39	51 4 21.5
14 57 23.3	8.9	57 59.08	57 45.8	12 37.30	-10.98	-0 0.15	+ 9.26	-1.96	- 5.90	14 58 4.61	51 8 46.7
14 58 44.2	8.6	59 15.34	58 52.0	43 34.60	-18.69	-0 0.18	+10.84	-2.02	- 6.00	14 59 20.49	52 37 43.5
15 0 42.7	9.0	1 17.90	0 48.9	51 4.40	-23.24	-0 0.18	+10.22	-2.02	- 5.90	15 1 23.03	52 30 9.1
15 2 12.8	8.4	2 45.12	2 15.7	35 13.50	-23.41	-0 0.19	+10.30	-2.04	- 5.90	15 2 50.14	52 46 0.3
ZONE 77, JUNE 4, 1871.											
13 23 30.0	8.2	24 9.54	23 44.6	31 29.90	-19.34	-0 0.27	+11.90	-1.45	-10.90	13 24 17.48	53 49 24.8
13 26 52.7	9.4	27 33.06	27 45.3	47 4.70	+ 9.54	-0 0.26	+11.87	-1.47	-10.80	13 27 40.91	53 34 19.4
13 29 57.8	9.2	30 39.10	30 17.8	58 38.25	-16.72	-0 0.26	+11.73	-1.49	-10.60	13 30 46.87	53 22 20.1
13 33 55.1	6.9	34 32.62	34 26.0	47 55.85	- 5.16	-0 0.26	+11.99	-1.52	-10.50	13 34 40.22	53 33 14.9
13 35 25.6	9.3	36 4.37	35 50.7	38 47.10	-10.42	-0 0.28	+13.28	-1.57	-10.60	13 36 11.73	54 42 19.8
13 37 49.0	9.0	38 27.56	38 2.0	57 48.45	-19.62	-0 0.27	+12.68	-1.58	-10.50	13 38 34.89	54 23 9.1
13 41 11.7	6.8	41 48.68	41 26.3	17 34.10	-16.88	-0 0.29	+13.36	-1.62	-10.50	13 41 55.77	55 3 27.3
13 45 34.5	8.0	46 13.12	45 47.6	26 30.55	-19.76	-0 0.26	+12.07	-1.62	-10.10	13 46 20.22	53 54 27.8
13 47 53.9	7.8	48 30.94	48 4.4	24 37.00	-21.02	-0 0.24	+11.39	-1.60	- 9.80	13 48 38.16	52 56 20.1
13 50 28.9	10.5	51 7.66	50 50.1	9 49.35	-13.88	-0 0.24	+11.78	-1.63	- 9.70	13 51 14.75	53 11 15.8
13 53 36.5	8.0	54 13.76	53 47.8	38 9.40	-20.25	-0 0.25	+12.04	-1.67	- 9.70	13 54 20.65	53 42 50.2
13 56 47.6	9.2	57 24.08	57 13.9	16 22.85	- 7.88	-0 0.26	+11.25	-1.70	- 9.60	13 57 30.80	54 4 48.9
13 59 13.4	7.9	59 49.56	59 26.5	20 4.75	-18.29	-0 0.24	+10.75	-1.68	- 9.30	13 59 56.38	53 0 56.9
14 1 31.0	7.6	2 7.52	1 42.8	26 39.00	-19.15	-0 0.26	+12.00	-1.73	- 9.40	14 2 14.09	53 54 23.3
14 6 16.0	9.1	6 54.10	6 28.7	1 20.70	-19.96	-0 0.25	+11.27	-1.74	- 9.00	14 7 0.62	53 19 41.3
14 8 16.6	9.4	9 1.86	8 45.7	15 37.35	-12.80	-0 0.24	+11.00	-1.74	- 8.90	14 9 8.37	53 5 32.0
14 10 11.8	7.7	10 47.58	10 19.6	13 56.80	- 2.17	-0 0.24	+11.42	-1.76	- 8.80	14 10 54.02	53 7 4.1
14 13 41.7	8.2	14 17.94	13 50.3	50 4.35	-21.09	-0 0.27	+13.15	-1.83	- 8.90	14 14 23.98	54 30 59.9
14 16 36.2	8.9	17 9.60	16 40.0	52 56.30	-22.34	-0 0.27	+12.71	-1.85	- 8.75	14 17 15.55	54 28 7.0
14 16 36.2	9.0	17 11.26	16 40.8	52 56.30	-20.42	-0 0.27	+12.74	-1.85	- 8.75	14 17 17.21	54 28 9.0
14 20 2.6	9.2	20 37.24	20 11.7	42 43.65	-19.98	-0 0.25	+11.89	-1.84	- 8.50	14 20 43.25	53 38 22.1
14 22 1.8	9.2	22 38.67	22 14.4	18 15.30	-19.23	-0 0.24	+11.32	-1.83	- 8.30	14 22 44.75	53 2 51.3
14 24 15.2	8.7	24 48.94	24 21.2	6 50.90	-21.31	-0 0.27	+12.31	-1.88	- 8.35	14 24 54.69	54 14 15.0
14 27 23.1	9.0	27 57.12	27 33.7	26 11.95	-18.14	-0 0.26	+11.94	-1.89	- 8.15	14 28 2.84	53 54 57.5
14 30 59.8	9.4	31 33.98	31 10.5	22 45.55	-18.63	-0 0.23	+11.16	-1.88	- 7.80	14 31 39.80	52 58 23.8
14 33 17.1	8.8	33 48.90	33 27.0	46 3.00	-17.11	-0 0.24	+11.61	-1.91	- 7.80	14 33 54.53	53 35 8.9
14 36 38.8	9.0	37 12.10	36 53.1	10 20.75	-14.99	-0 0.23	+11.00	-1.92	- 7.55	14 37 17.71	53 10 53.6
14 39 48.0	9.0	40 19.50	40 2.5	30 7.95	-12.88	-0 0.27	+12.80	-2.00	- 7.65	14 40 24.63	54 51 10.9
14 42 54.1	8.5	43 26.36	42 59.4	0 21.40	-21.21	-0 0.24	+11.09	-1.96	- 7.25	14 43 31.74	53 20 48.5
14 45 39.0	7.8	46 11.30	45 47.6	25 32.40	-18.80	-0 0.23	+10.73	-1.95	- 7.00	14 46 16.72	52 55 40.5
14 47 33.7	8.1	48 5.96	47 40.0	15 9.40	-20.55	-0 0.23	+10.81	-1.97	- 7.00	14 48 11.28	53 6 2.2
14 49 34.9	8.9	50 7.10	49 41.2	28 16.75	- 20.09	-0 0.25	+12.23	-2.02	- 6.90	14 52 12.17	53 52 57.3
14 52 31.9	8.5	53 2.68	52 44.1	27 39.20	-14.42	-0 0.25	+12.24	-2.03	- 6.80	14 53 7.66	53 53 41.3
14 54 35.0	9.0	55 6.60	54 32.7	5 10.60	-26.69	-0 0.24	+10.85	-2.02	- 6.60	14 55 11.67	53 15 57.0

ZONE 78, JUNE 5, 1871.													
R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.		
						R. A.	Dec.	R. A.	Dec.				
h m s		m s	m s	' "	"	m s	"	s	"	h m s	' "	' "	' "
13 17 14.9	9.2	17 56.34	17 31.5	16 54.90	-20.51	-0 0.38	+ 9.22	-1.32	-10.70	13 18 4.72	51 3	65.0	
13 18 40.4	...	19 20.98	19 32.8	33 32.30	+ 9.28	-0 0.39	+10.45	-1.34	-10.80	13 19 29.23	51 47	44.3	
13 18 54.6	...	19 37.54	20 5.0	34 48.80	+22.47	-0 0.39	+10.47	-1.34	-10.80	13 19 45.78	51 46	41.0	
13 20 8.2	9.0	20 49.78	21 22.2	4 29.20	+25.47	-0 0.38	+ 9.78	-1.35	-10.70	13 20 58.03	51 17	3.2	
13 22 1.4	9.0	22 42.72	22 20.8	14 41.70	-17.29	-0 0.38	+ 9.78	-1.35	-10.60	13 22 50.94	51 6	8.2	
13 22 47.8	6.5	23 28.82	23 20.6	58 52.80	- 6.74	-0 0.38	+10.02	-1.37	-10.60	13 23 36.97	51 22	8.0	
13 25 2.4	9.2	25 43.90	25 14.8	4 17.90	-22.88	-0 0.38	+ 9.80	-1.38	-10.50	13 25 51.99	51 16	27.0	
13 36 12.4	8.9	36 51.90	36 35.5	48 57.40	-11.95	-0 0.40	+10.22	-1.47	-10.15	13 36 59.55	51 32	0.6	
13 37 34.0	9.5	38 14.43	38 3.8	8 30.00	- 8.74	-0 0.39	+ 9.79	-1.47	-10.00	13 38 22.09	51 12	31.2	
13 38 22.4	9.2	39 5.12	38 54.0	31 49.80	- 9.03	-0 0.40	+10.17	-1.49	-10.10	13 39 12.67	51 49	11.5	
13 40 38.6	9.4	41 14.62	40 43.9	20 19.55	-23.17	-0 0.47	+13.11	-1.60	-10.65	13 41 21.57	55 0	30.3	
13 41 11.7	6.4	41 48.64	41 56.3	17 52.50	+ 5.80	-0 0.47	+13.81	-1.61	-10.65	13 41 55.56	55 3	27.1	
13 42 44.4	10.5	43 22.88	43 5.2	22 43.75	-13.37	-0 0.47	+13.68	-1.61	-10.60	13 43 29.76	54 58	16.9	
13 44 14.8	8.7	44 51.46	44 30.3	22 33.40	-16.01	-0 0.47	+13.59	-1.63	-10.50	13 44 58.27	54 58	24.8	
13 45 30.7	9.2	46 10.14	45 51.4	58 34.25	-15.36	-0 0.39	+ 9.91	-1.53	- 9.80	13 46 17.52	51 22	21.8	
13 46 47.2	9.0	47 25.66	47 5.4	24 48.70	-16.84	-0 0.39	+ 9.65	-1.53	- 9.60	13 47 33.05	50 56	6.0	
13 48 7.3	8.8	48 48.04	48 20.9	33 39.85	-22.15	-0 0.40	+10.30	-1.56	- 9.70	13 48 55.26	51 47	10.4	
13 50 2.9	8.4	50 41.32	50 43.0	31 18.40	+ 1.38	-0 0.40	+10.13	-1.57	- 9.70	13 50 48.48	51 49	55.5	
13 51 38.7	8.6	52 16.52	51 51.1	11 56.75	-20.97	-0 0.39	+ 9.31	-1.56	- 9.50	13 52 23.73	51 8	54.4	
13 53 52.2	8.6	54 29.98	54 7.5	0 32.05	-18.50	-0 0.39	+ 9.31	-1.58	- 9.45	13 54 37.09	51 20	22.0	
13 54 48.2	9.0	55 27.90	55 10.6	40 54.60	-13.89	-0 0.41	+10.81	-1.63	- 9.60	13 55 34.76	52 40	5.6	
13 56 39.9	10.0	57 18.26	56 57.0	50 4.00	-17.06	-0 0.41	+10.50	-1.63	- 9.60	13 57 25.09	52 30	53.0	
13 57 37.5	6.0	58 13.66	57 58.0	46 35.40	-12.84	-0 0.40	+ 9.85	-1.62	- 9.30	13 58 20.60	51 34	25.6	
14 1 48.5	8.0	2 24.88	2 8.3	32 36.70	-13.20	-0 0.41	+11.28	-1.68	- 9.35	14 2 31.49	52 48	26.1	
14 3 31.4	8.8	4 9.24	3 43.9	7 47.35	-20.86	-0 0.39	+ 9.52	-1.64	- 9.00	14 4 16.07	51 13	6.7	
14 5 2.0	9.4	5 39.50	5 52.5	40 43.55	+11.26	-0 0.40	+ 9.82	-1.67	- 9.00	14 5 46.19	51 40	43.2	
14 7 40.8	7.8	8 16.92	7 51.4	2 58.40	-20.99	-0 0.39	+ 9.65	-1.67	- 8.80	14 8 23.60	51 17	56.6	
14 9 23.3	9.2	10 2.32	9 34.6	59 43.25	-22.85	-0 0.39	+10.98	-1.68	- 8.80	14 10 8.95	51 21	11.5	
14 10 29.7	7.9	11 6.46	10 42.2	46 37.95	-19.88	-0 0.40	+ 9.76	-1.70	- 8.75	14 11 13.00	51 34	18.8	
14 11 53.2	8.2	12 29.00	12 7.2	46 37.95	-17.84	-0 0.40	+ 9.79	-1.70	- 8.70	14 12 35.50	51 34	21.6	
14 13 44.0	9.2	14 20.78	13 53.9	29 1.85	-21.86	-0 0.40	+10.45	-1.72	- 8.65	14 14 27.18	51 51	54.4	
14 15 20.8	9.0	15 57.96	15 50.0	6 15.80	- 6.45	-0 0.41	+10.55	-1.75	- 8.65	14 16 4.22	52 14	56.2	
14 15 20.8	9.0	15 58.64	16 43.0	6 15.80	+35.78	-0 0.41	+10.07	-1.75	- 8.65	14 16 4.90	52 15	38.0	
14 16 55.5	8.3	17 30.32	17 10.4	40 13.50	-16.24	-0 0.40	+ 9.69	-1.74	- 8.65	14 17 36.64	51 40	48.2	
14 17 26.0	9.2	18 4.38	17 55.2	29 3.65	- 7.48	-0 0.40	+10.61	-1.75	- 8.50	14 18 10.66	51 52	8.0	
14 19 59.4	8.0	20 34.96	20 13.9	50 35.85	-17.28	-0 0.40	+ 9.57	-1.75	- 8.30	14 20 41.23	51 30	25.7	
14 21 43.4	9.4	22 18.33	21 54.7	1 12.80	-19.41	-0 0.39	+ 9.40	-1.75	- 8.20	14 22 24.59	51 19	46.8	
14 21 43.4	9.2	22 19.24	22 52.8	3 43.50	+27.66	-0 0.39	+ 9.67	-1.75	- 8.20	14 22 25.50	51 18	3.5	
14 24 25.3	9.4	25 2.78	24 49.7	34 58.75	-10.91	-0 0.38	+ 9.59	-1.76	- 8.00	14 25 9.05	50 46	10.4	
14 26 45.0	8.3	27 21.58	26 58.2	12 40.95	-19.74	-0 0.37	+ 8.41	-1.75	- 7.80	14 27 27.91	50 8	18.8	
14 31 34.3	8.0	32 7.32	31 58.0	33 4.10	- 7.57	-0 0.41	+10.40	-1.83	- 7.80	14 32 13.18	51 48	10.8	
14 33 36.7	8.9	34 13.62	33 46.0	43 4.55	-22.55	-0 0.41	+10.05	-1.83	- 7.70	14 34 19.46	51 37	55.6	
14 34 41.7	8.5	35 16.34	34 55.5	48 26.05	-17.02	-0 0.41	+10.10	-1.84	- 7.65	14 35 22.16	51 32	40.0	
14 35 37.8	9.5	36 12.14	36 1.0	50 28.80	- 9.09	-0 0.41	+ 9.65	-1.84	- 7.55	14 36 17.94	51 30	45.0	
14 37 17.2	7.8	37 49.60	37 33.6	48 52.65	-12.81	-0 0.42	+11.23	-1.89	- 7.65	14 37 55.14	52 32	19.3	
14 39 1.8	8.9	39 36.14	39 8.0	12 22.15	-23.20	-0 0.40	+ 9.38	-1.85	- 7.30	14 39 41.92	51 8	38.3	
14 41 40.3	7.5	42 14.74	41 45.6	25 45.80	-24.16	-0 0.40	+ 8.81	-1.85	- 7.20	14 42 20.50	50 55	13.8	
14 42 53.3	9.3	43 28.10	43 2.3	21 33.25	-21.38	-0 0.40	+ 9.10	-1.86	- 7.10	14 43 33.81	50 59	29.8	
14 44 50.7	6.4	45 23.42	44 49.8	27 26.05	-27.29	-0 0.40	+ 9.02	-1.87	- 7.00	14 45 28.93	51 53	31.5	
14 45 54.7	9.0	46 29.10	46 31.1	31 56.15	+ 1.63	-0 0.41	+10.23	-1.90	- 7.10	14 46 34.56	51 49	31.7	
14 48 21.3	8.4	48 58.08	48 30.5	11 50.70	-22.80	-0 0.40	+ 9.29	-1.90	- 6.90	14 49 3.60	51 9	12.6	
14 50 0.3	9.2	50 36.54	49 53.3	12 20.60	-35.68	-0 0.40	+ 9.05	-1.90	- 6.80	14 50 42.03	51 8	30.0	
14 50 0.3	9.5	50 38.28	50 13.3	12 20.60	-20.65	-0 0.40	+ 9.40	-1.90	- 6.80	14 50 43.77	51 8	45.4	

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
14 51 4.0	8.4	51 38.92	51 29.6	43 38.55	- 7.76	-0 0.39	+ 9.23	-1.89	- 6.65	14 51 44.49	50 37 40.6
14 52 50.7	8.4	53 23.60	52 56.1	59 49.05	-22.61	-0 0.40	+10.01	-1.93	- 6.70	14 53 28.97	51 21 16.6
14 55 55.8	6.8	56 30.10	55 57.1	16 39.20	-27.30	-0 0.40	+ 9.09	-1.93	- 6.50	14 56 35.46	51 4 21.4
14 57 23.3	8.5	57 59.44	57 35.6	12 23.80	-19.65	-0 0.40	+ 9.44	-1.94	- 6.40	14 58 4.74	51 8 45.1
14 58 44.2	8.5	59 15.46	58 53.3	43 30.05	-17.73	-0 0.42	+11.21	-2.00	- 6.50	14 59 20.39	52 37 43.5
15 0 42.7	8.6	1 18.12	0 50.3	50 59.00	-22.27	-0 0.42	+10.54	-2.00	- 6.40	15 1 23.03	52 30 9.0
15 2 12.8	8.5	2 45.34	2 24.1	35 14.40	-16.88	-0 0.42	+10.76	-2.02	- 6.40	15 2 50.15	52 46 2.5
ZONE 79, JUNE 6, 1871.											
13 58 57.2	8.8	59 34.68	59 1.0	17 30.55	-27.27	-0 0.61	+ 9.95	-1.62	- 9.50	13 59 41.32	52 3 16.6
14 1 48.5	8.7	2 25.12	1 59.3	32 29.35	-20.52	-0 0.63	+10.84	-1.66	- 9.60	14 2 31.53	52 48 25.9
14 3 11.5	8.3	3 48.36	3 24.2	9 46.45	-19.53	-0 0.62	+10.63	-1.65	- 9.40	14 3 54.83	52 11 10.0
14 4 49.0	7.5	5 25.64	5 20.0	30 37.30	- 4.45	-0 0.63	+10.73	-1.68	- 9.40	14 5 31.95	52 50 34.6
14 6 22.0	8.9	7 0.64	6 42.5	59 42.00	-15.20	-0 0.59	+ 8.75	-1.62	- 8.90	14 7 7.32	50 21 17.9
14 8 17.5	8.0	8 52.90	8 16.2	58 22.85	-29.48	-0 0.62	+10.39	-1.69	- 9.20	14 8 59.17	52 22 24.5
14 8 17.5	6.5	8 54.12	8 25.2	58 22.85	-23.22	-0 0.62	+10.52	-1.69	- 9.20	14 9 0.40	52 22 30.9
14 10 57.0	9.1	11 33.62	11 13.8	41 50.90	-15.81	-0 0.62	+10.65	-1.72	- 9.10	14 11 39.76	52 39 11.0
14 12 40.0	7.5	13 16.24	12 51.0	54 59.15	-20.22	-0 0.62	+10.89	-1.72	- 9.00	14 13 22.37	52 25 59.0
14 13 27.2	7.6	14 2.40	13 47.9	44 31.70	-11.59	-0 0.62	+11.11	-1.73	- 9.00	14 14 8.47	52 36 35.5
14 15 23.2	7.5	15 57.12	15 28.2	36 10.40	-23.02	-0 0.62	+10.52	-1.75	- 8.90	14 16 3.11	52 44 45.2
14 19 14.0	9.0	19 50.14	19 24.7	20 7.95	-20.57	-0 0.61	+ 9.64	-1.75	- 8.65	14 19 56.14	52 0 50.2
14 22 33.7	9.2	23 9.40	22 51.6	37 42.35	-14.19	-0 0.62	+10.88	-1.79	- 8.60	14 23 15.17	52 43 24.2
14 25 51.1	9.0	26 26.36	25 59.6	21 16.40	-20.73	-0 0.66	+11.92	-1.85	- 8.65	14 26 31.75	53 59 45.3
14 29 53.7	8.5	30 27.98	30 6.0	45 38.75	-17.59	-0 0.62	+10.34	-1.84	- 8.25	14 30 33.54	52 35 25.7
14 32 58.8	8.5	33 33.28	33 10.2	46 41.10	-18.48	-0 0.62	+10.51	-1.85	- 8.10	14 33 38.76	52 34 23.5
14 43 46.2	8.0	44 19.54	43 52.2	23 7.30	-22.14	-0 0.60	+10.07	-1.89	- 7.50	14 44 24.84	51 57 56.2
14 46 6.3	7.0	46 39.84	46 11.0	18 18.15	-23.31	-0 0.60	+10.17	-1.90	- 7.40	14 46 45.07	52 2 44.9
14 47 2.0	8.8	47 35.48	47 19.7	27 58.45	-12.50	-0 0.62	+11.11	-1.94	- 7.40	14 47 40.49	52 53 16.6
14 49 32.7	9.3	50 4.84	49 34.8	32 47.35	-23.89	-0 0.62	+10.83	-1.95	- 7.30	14 50 9.79	52 48 16.7
14 51 34.5	6.0	52 8.80	51 46.6	12 39.95	-18.72	-0 0.57	+ 8.14	-1.86	- 6.80	14 52 14.29	50 8 27.6
14 53 7.4	9.0	53 42.80	53 18.5	15 13.55	-19.65	-0 0.60	+ 9.74	-1.94	- 7.00	14 53 47.83	52 5 54.8
14 54 24.7	8.8	54 57.38	54 39.4	40 10.10	-14.36	-0 0.61	+10.40	-1.97	- 7.00	14 55 2.24	52 41 4.5
14 56 24.3	8.3	56 56.58	56 41.6	27 33.55	-11.91	-0 0.62	+11.05	-1.99	- 7.00	14 57 1.33	52 53 44.6
14 58 44.2	7.0	59 15.84	59 34.9	44 1.85	+15.26	-0 0.61	+10.95	-1.99	- 6.80	14 59 20.59	52 37 44.2
15 0 42.7	8.8	1 18.36	0 54.9	51 3.35	-18.84	-0 0.61	+10.29	-1.99	- 6.70	15 1 23.09	52 30 8.5
15 2 12.8	8.6	2 45.64	2 24.2	35 14.45	-16.25	-0 0.61	+12.63	-2.09	- 6.90	15 2 50.19	52 46 2.5
15 3 17.0	8.9	3 52.96	3 29.5	41 40.25	-18.77	-0 0.61	+10.61	-2.01	- 6.60	15 3 57.59	52 39 32.7
15 4 12.3	9.2	4 46.12	4 35.5	29 46.30	- 8.43	-0 0.62	+11.46	-2.01	- 6.55	15 4 50.68	52 51 38.2
15 5 16.5	8.3	5 48.60	5 28.9	11 52.55	-15.91	-0 0.60	+10.07	-2.00	- 6.40	15 5 53.30	52 9 23.5
15 7 18.8	9.0	7 49.22	7 23.9	15 48.85	-20.46	-0 0.60	+ 9.83	-2.01	- 6.30	15 7 53.88	52 5 23.0
15 9 52.5	8.7	10 24.74	9 58.4	25 13.15	-21.34	-0 0.60	+ 9.57	-2.01	- 6.10	15 10 29.38	51 55 58.4
15 10 43.4	9.1	11 15.14	10 54.9	31 34.15	-16.15	-0 0.62	+10.83	-2.05	- 6.20	15 11 19.53	52 49 44.0
15 11 29.7	9.0	12 0.36	11 35.6	38 19.80	-19.77	-0 0.61	+10.87	-2.05	- 6.10	15 12 4.76	52 42 55.1
15 13 49.7	8.5	14 19.72	13 55.9	16 51.55	-19.26	-0 0.60	+10.03	-2.04	- 5.90	15 14 24.22	52 4 23.8
15 15 34.2	8.7	16 5.42	15 43.7	37 7.70	-17.30	-0 0.61	+10.69	-2.07	- 5.90	15 16 9.72	52 44 10.7
15 15 40.5	8.7	16 12.88	16 34.9	39 6.80	+17.53	-0 0.61	+10.69	-2.07	- 5.90	15 16 17.18	52 43 46.6
15 17 15.2	7.5	17 46.08	17 27.8	33 49.65	-14.57	-0 0.60	+11.13	-2.08	- 5.85	15 17 50.34	52 47 32.4
15 18 38.2	8.0	19 8.88	18 48.2	45 30.70	-16.55	-0 0.60	+10.33	-2.08	- 5.70	15 19 13.15	52 35 49.1
15 20 33.5	8.5	21 4.44	20 36.9	14 47.65	-22.24	-0 0.59	+10.48	-2.07	- 5.55	15 21 8.78	52 6 27.3
15 22 17.9	6.8	22 48.46	22 24.6	51 58.10	-20.02	-0 0.60	+ 9.65	-2.02	- 5.20	15 22 52.74	52 29 19.0
15 23 42.0	8.5	24 13.16	23 50.2	20 30.65	-18.64	-0 0.59	+ 9.70	-2.08	- 5.40	15 24 17.45	52 0 48.1
15 25 47.1	8.9	26 17.00	25 52.0	50 47.90	-19.57	-0 0.63	+11.30	-2.15	- 5.45	15 26 20.84	53 30 32.0

ZONE 80, JUNE 9, 1871.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	' "
13 34 35.0	7.5	35 14.44	34 37.4	34 48.15	-27.93	-0 1.33	+12.19	-1.43	-11.35	13 35 21.02	53 44 39.3
13 37 12.3	7.8	37 52.98	37 2.8	39 59.35	-27.60	-0 1.25	+ 8.38	-1.38	-10.70	13 37 59.93	50 39 25.6
13 41 29.9	9.3	42 10.60	42 52.8	56 1.60	+33.61	-0 1.27	+ 9.12	-1.43	-10.65	13 42 17.30	51 24 26.0
13 44 34.8	9.0	45 14.94	44 41.3	20 59.25	-27.01	-0 1.27	+ 8.78	-1.45	-10.46	13 45 21.58	50 58 28.1
13 46 21.3	8.7	47 3.08	46 26.1	33 27.15	-29.23	-0 1.27	+10.06	-1.47	-10.50	13 47 9.57	51 45 59.5
13 50 48.0	9.0	51 27.08	52 3.2	16 17.15	+28.96	-0 1.26	+ 8.87	-1.49	-10.25	13 51 33.52	51 3 7.4
13 53 58.0	8.8	54 37.92	54 3.4	12 1.65	-27.64	-0 1.26	+ 9.12	-1.51	-10.10	13 54 44.26	51 7 27.3
13 55 48.7	8.3	56 26.98	57 5.1	35 49.60	+30.78	-0 1.25	+ 8.37	-1.51	-10.00	13 56 33.32	50 44 37.4
13 58 58.4	9.2	59 36.12	59 6.5	20 57.25	-24.30	-0 1.24	+ 7.78	-1.51	- 9.70	13 59 42.49	49 58 34.9
14 0 45.3	7.0	1 23.88	0 53.6	4 42.75	-24.74	-0 1.24	+ 8.78	-1.53	- 9.70	14 1 30.15	50 14 50.3
14 3 29.4	8.5	4 8.48	3 35.9	21 28.15	-26.77	-0 1.24	+ 7.82	-1.54	- 9.55	14 4 14.71	49 58 2.5
14 5 13.4	8.7	5 50.98	5 20.0	16 46.40	-25.41	-0 1.24	+ 7.98	-1.56	- 9.50	14 5 57.14	50 2 46.2
14 7 36.8	8.8	8 15.42	7 38.0	22 21.50	-30.08	-0 1.26	+ 8.94	-1.60	- 9.55	14 8 21.38	50 57 7.7
14 10 2.8	8.3	10 40.82	10 4.6	39 59.20	-28.68	-0 1.27	+ 9.42	-1.63	- 9.60	14 10 46.56	51 39 32.3
14 12 12.3	6.0	12 48.78	12 17.6	26 26.60	-24.59	-0 1.28	+ 9.87	-1.65	- 9.55	14 12 54.41	51 53 9.9
14 14 19.8	9.2	14 56.94	14 26.0	27 0.65	-24.35	-0 1.28	+10.00	-1.67	- 9.45	14 15 2.49	51 52 36.8
14 16 55.5	8.6	17 31.18	16 58.0	38 47.50	-26.28	-0 1.27	+10.08	-1.68	- 9.30	14 17 36.69	51 40 48.7
14 20 8.5	9.4	20 45.40	20 8.6	39 19.40	-29.14	-0 1.27	+10.11	-1.70	- 9.20	14 20 50.81	51 40 14.7
14 22 34.4	7.8	23 10.84	22 40.3	22 14.05	-25.06	-0 1.24	+ 8.00	-1.66	- 8.80	14 23 16.50	49 57 22.9
14 26 50.3	9.0	27 29.96	26 54.2	27 8.05	-28.85	-0 1.25	+ 8.85	-1.71	- 8.75	14 27 35.34	50 52 26.9
14 29 11.5	9.8	29 48.16	29 17.0	34 30.80	-25.20	-0 1.25	+ 9.25	-1.73	- 8.80	14 29 53.49	50 45 8.7
14 31 18.2	9.2	31 52.62	32 30.5	35 0.85	+28.60	-0 1.32	+12.45	-1.84	- 9.05	14 31 57.26	53 45 35.8
14 34 16.1	9.0	34 49.78	34 16.9	31 5.90	-24.79	-0 1.32	+11.86	-1.85	- 8.90	14 34 54.33	53 48 37.6
14 38 30.5	9.0	39 6.70	39 50.2	19 59.55	+35.69	-0 1.23	+ 8.27	-1.76	- 8.10	14 39 11.92	50 0 42.6
14 41 22.3	9.0	41 56.90	42 37.8	31 48.45	+32.99	-0 1.25	+ 8.58	-1.80	- 8.10	14 42 1.88	50 48 51.9
14 44 27.5	7.5	45 1.70	45 33.8	59 14.25	+26.15	-0 1.24	+ 8.74	-1.80	- 7.90	14 45 6.69	50 21 20.3
14 47 13.5	8.8	47 47.88	47 10.8	4 0.45	-27.66	-0 1.32	+12.84	-1.95	- 8.40	14 47 51.93	54 15 44.6
14 49 22.1	8.7	49 54.44	49 22.3	11 39.20	-24.01	-0 1.32	+12.34	-1.96	- 8.20	14 49 58.45	54 8 9.7
14 52 31.9	8.5	53 3.82	53 37.3	26 58.50	+25.20	-0 1.32	+12.10	-1.97	- 8.00	14 53 7.79	53 53 40.3
14 54 35.0	8.9	55 7.56	55 45.5	4 42.15	+28.94	-0 1.30	+11.84	-1.96	- 7.85	14 55 11.63	53 16 0.8
14 57 35.1	9.3	58 7.28	57 31.7	14 16.95	-26.66	-0 1.32	+12.69	-2.00	- 7.80	14 58 11.07	54 5 32.0
15 1 40.6	9.2	2 13.94	1 34.4	25 31.40	-31.12	-0 1.27	+ 9.54	-1.94	- 7.30	15 2 18.15	51 54 11.5
15 3 40.6	9.3	4 16.64	3 45.7	9 59.40	-24.74	-0 1.25	+ 9.80	-1.93	- 7.20	15 4 20.96	51 9 50.7
15 5 32.1	8.0	6 3.00	6 35.6	27 30.45	+25.11	-0 1.29	+11.09	-2.00	- 7.25	15 6 6.87	52 53 11.2
15 8 3.2	8.1	8 35.44	8 2.4	53 56.15	-25.10	-0 1.31	+11.96	-2.03	- 7.25	15 8 39.10	53 25 56.8
15 9 51.7	9.3	10 23.36	10 58.0	17 34.50	+26.55	-0 1.30	+11.24	-2.03	- 7.05	15 10 27.07	53 3 10.1
15 14 39.8	9.1	15 9.52	15 48.6	20 1.65	+29.33	-0 1.32	+11.77	-2.09	- 6.90	15 15 12.86	54 0 47.6
15 17 2.8	7.5	17 33.16	18 17.2	58 19.60	+32.73	-0 1.33	+12.68	-2.12	- 6.80	15 17 36.33	54 22 34.7
15 19 48.4	8.9	20 17.34	19 43.3	12 18.85	-25.44	-0 1.32	+12.43	-2.12	- 6.60	15 20 20.52	54 7 38.0
15 22 35.4	6.5	23 5.60	22 32.1	52 35.25	-24.87	-0 1.33	+12.84	-2.15	- 6.50	15 23 8.61	54 27 23.4
15 26 36.6	9.2	27 7.76	27 45.0	54 56.15	+29.61	-0 1.25	+ 9.94	-2.04	- 5.90	15 27 11.49	51 25 55.8
15 29 38.3	8.8	30 7.84	29 33.8	49 58.55	-25.82	-0 1.31	+12.21	-2.14	- 6.00	15 30 10.94	53 30 0.9
15 31 25.4	6.0	31 55.04	31 22.2	59 49.95	-24.42	-0 1.33	+13.18	-2.18	- 6.00	15 31 57.87	54 20 12.4
15 33 48.7	6.2	34 16.76	33 39.1	24 53.85	-27.66	-0 1.34	+13.77	-2.21	- 5.90	15 34 19.37	54 55 6.6
15 38 53.5	6.0	39 23.82	38 47.2	34 38.00	-28.28	-0 1.27	+11.31	-2.15	- 5.35	15 39 26.93	52 45 21.4
15 40 46.9	9.2	41 18.72	38 42.1	41 1.50	+33.14	-0 1.27	+10.38	-2.15	- 5.30	15 41 21.82	52 39 59.0

ZONE 81, JUNE 12, 1871.

13 58 57.2	8.5	59 35.84	58 59.7	16 12.45	-28.34	-0 1.90	+ 9.79	-1.52	-10.60	13 59 41.29	52 3 17.2
14 1 48.5	8.2	2 26.26	1 49.4	31 3.80	-28.47	-0 1.92	+10.52	-1.55	-10.70	14 2 31.49	52 48 26.9

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.			Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.		R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"		s "		h m s	° ' "
14 3 11.5	8.4	3 49.48	3 17.7	8 25.45	-24.89	-0 1.90	+10.43	-1.55	-10.50		14 3 54.77	52 11 9.2
14 4 49.0	7.8	5 26.76	6 12.3	30 2.05	+35.08	-0 1.92	+10.16	-1.58	-10.60		14 5 31.88	52 50 32.4
14 6 22.0	9.5	7 1.76	6 33.5	58 18.30	-23.06	-0 1.87	+ 8.53	-1.53	-10.10		14 7 7.25	50 21 17.2
14 8 17.5	7.0	8 53.94	8 13.0	57 4.65	-31.87	-0 1.91	+10.19	-1.59	-10.40		14 8 59.03	52 22 23.8
14 8 17.5	5.8	8 55.12	8 22.5	57 4.65	-25.40	-0 1.91	+10.36	-1.59	-10.40		14 9 0.21	52 22 30.4
14 10 57.0	9.2	11 34.70	10 51.7	40 16.05	-33.31	-0 1.91	+10.07	-1.62	-10.30		14 11 39.65	52 39 11.4
14 12 40.0	6.8	13 17.48	12 45.7	53 39.95	-24.75	-0 1.90	+10.74	-1.63	-10.20		14 13 22.42	52 25 57.2
14 13 27.2	7.0	14 3.48	14 44.4	43 57.60	+31.70	-0 1.90	+10.81	-1.63	-10.20		14 14 8.37	52 36 36.2
14 15 23.2	7.7	15 58.42	15 25.0	34 52.25	-25.81	-0 1.90	+11.29	-1.64	-10.10		14 16 3.24	52 44 45.0
14 19 14.0	8.9	19 51.42	19 6.6	18 38.65	-35.20	-0 1.89	+10.03	-1.64	- 9.90		14 19 56.25	52 0 48.8
14 22 33.7	9.5	23 10.52	23 47.0	37 8.90	+28.23	-0 1.90	+10.63	-1.69	- 9.90		14 23 15.11	52 43 23.3
14 25 51.1	9.4	26 27.68	25 55.0	19 55.05	-25.70	-0 1.93	+10.52	-1.76	-10.00		14 26 31.89	54 59 43.7
14 29 53.7	8.7	30 29.04	29 56.0	44 14.50	-25.60	-0 1.90	+10.99	-1.74	- 9.50		14 30 33.42	52 35 26.2
14 32 58.8	8.5	33 34.48	32 54.0	45 11.30	-31.43	-0 1.90	+10.01	-1.76	- 9.40		14 33 38.77	52 34 23.4
14 33 34.3	8.7	34 11.16	34 53.0	0 6.70	+32.61	-0 1.90	+ 9.68	-1.76	- 9.30		14 34 15.45	52 20 31.9
14 36 19.2	6.7	36 53.70	36 12.4	33 12.00	-31.90	-0 1.90	+10.81	-1.79	- 9.30		14 36 57.85	52 46 23.8
14 38 39.2	8.2	39 14.28	38 43.1	53 5.60	-24.28	-0 1.90	+10.70	-1.79	- 9.20		14 39 18.42	52 26 38.4
14 41 14.0	8.2	41 49.48	41 12.8	10 32.25	-28.75	-0 1.88	+ 9.76	-1.80	- 8.95		14 41 53.62	52 9 7.1
14 43 46.2	8.7	44 20.64	43 46.5	21 45.55	-26.82	-0 1.88	+ 9.85	-1.81	- 8.85		14 44 24.74	51 57 56.5
14 46 6.3	7.5	46 41.02	46 6.5	16 58.75	-27.09	-0 1.88	+ 9.98	-1.82	- 8.75		14 46 45.05	52 2 43.8
14 47 2.0	9.1	47 36.60	48 18.3	27 26.65	+32.13	-0 1.90	+10.76	-1.86	- 8.85		14 47 40.41	52 53 16.0
14 49 32.7	9.3	50 6.04	49 33.6	31 30.15	-25.01	-0 1.90	+10.68	-1.87	- 8.70		14 50 9.79	52 48 16.0
14 51 34.5	5.5	52 9.92	51 33.8	11 12.25	-29.53	-0 1.84	+ 7.73	-1.79	- 8.20		14 52 14.21	50 8 27.5
14 53 7.4	9.3	53 43.92	53 10.4	13 51.05	-26.27	-0 1.88	+10.39	-1.86	- 8.40		14 53 47.75	52 5 54.8
14 54 24.7	...	54 58.36	55 34.8	39 38.75	+28.17	-0 1.89	+11.09	-1.89	- 8.45		14 55 2.02	52 41 2.4
14 56 24.3	8.8	56 57.70	57 34.0	26 57.30	+27.96	-0 1.90	+10.77	-1.91	- 8.40		14 57 1.25	52 53 43.9
14 58 1.2	7.0	58 34.44	58 2.9	13 6.90	-24.68	-0 1.88	+10.27	-1.90	- 8.20		14 58 38.12	52 6 41.8
15 0 42.7	8.6	1 19.56	0 48.0	49 41.90	-24.57	-0 1.89	+11.00	-1.92	- 8.10		15 1 23.08	52 30 8.4
15 2 12.8	8.4	2 46.68	2 10.0	33 46.15	-27.03	-0 1.89	+13.20	-2.01	- 8.40		15 2 50.03	52 46 3.9
15 3 17.0	9.0	3 54.08	3 19.0	40 14.90	-27.19	-0 1.89	+10.25	-1.94	- 8.00		15 3 57.50	52 39 32.7
15 4 12.3	...	4 47.26	5 34.5	29 14.05	+36.53	-0 1.90	+11.00	-1.95	- 8.00		15 4 50.60	52 51 38.3
15 5 16.5	8.7	5 49.58	6 21.1	11 15.00	+24.68	-0 1.87	+ 9.94	-1.94	- 7.85		15 5 53.07	52 9 24.9
15 7 18.8	8.9	7 50.40	7 12.8	14 22.10	-29.50	-0 1.87	+10.42	-1.94	- 7.75		15 7 53.86	52 5 24.7
15 9 52.5	8.2	10 25.94	9 51.7	23 51.95	-26.92	-0 1.87	+10.21	-1.95	- 7.60		15 10 29.37	51 55 58.0
15 10 43.4	9.4	11 16.24	11 54.7	31 3.25	+29.71	-0 1.89	+10.48	-1.99	- 7.70		15 11 19.42	52 49 43.7
15 13 49.7	7.8	14 20.88	13 44.1	15 25.50	-28.88	-0 1.87	+ 9.64	-1.98	- 7.40		15 14 24.17	52 4 23.1
15 15 34.2	8.5	16 6.72	15 26.4	35 37.50	-31.16	-0 1.88	+10.23	-2.07	- 7.40		15 16 9.75	52 44 9.9
15 15 40.5	8.5	16 13.90	17 1.0	38 8.35	+36.41	-0 1.88	+10.57	-2.01	- 7.40		15 16 16.99	52 42 47.0
15 17 15.2	7.8	17 47.22	18 23.8	33 15.45	+28.26	-0 1.88	+10.93	-2.02	- 7.35		15 17 50.26	52 47 32.6
15 18 38.2	8.4	19 9.98	19 43.2	44 56.20	+25.75	-0 1.88	+11.09	-2.02	- 7.25		15 19 13.03	52 35 49.9
15 22 17.9	6.6	22 49.40	22 13.4	50 34.05	-29.26	-0 1.88	+ 8.01	-1.95	- 6.80		15 22 52.47	52 29 15.4
15 23 42.0	8.7	24 14.22	23 44.4	19 9.65	-23.50	-0 1.87	+10.41	-2.02	- 6.90		15 24 17.29	52 0 48.3
15 25 47.1	9.1	26 18.10	25 34.6	49 17.65	-33.03	-0 1.91	+11.75	-2.09	- 7.00		15 26 20.72	53 30 32.6
ZONE 82, JUNE 14, 1871.												
14 21 51.3	8.4	22 28.40	21 57.2	21 12.00	-25.09	-0 2.27	+ 8.89	-1.61	-10.00		14 22 32.97	50 58 23.6
14 23 37.6	6.5	24 12.50	23 36.1	55 12.60	-29.62	-0 2.26	+ 7.94	-1.60	- 9.80		14 24 17.12	50 24 18.0
14 26 49.6	8.9	27 25.32	26 47.9	50 38.15	-29.74	-0 2.27	+ 9.19	-1.65	- 9.90		14 27 29.66	51 28 54.2
14 29 45.1	9.5	29 10.90	28 39.8	1 28.00	-24.83	-0 2.27	+10.26	-1.66	- 9.80		14 29 15.21	51 18 11.1
14 30 56.3	8.8	31 32.16	30 57.6	15 33.15	-27.76	-0 2.27	+ 9.80	-1.67	- 9.65		14 31 36.44	51 4 2.9
14 32 20.9	8.8	32 58.30	32 27.3	47 28.10	-25.16	-0 2.26	+ 8.65	-1.67	- 9.50		14 33 2.64	50 32 9.8
14 33 51.5	8.6	34 29.78	33 55.8	27 58.95	-26.78	-0 2.28	+10.15	-1.71	- 9.70		14 34 33.84	51 51 39.0
14 36 19.2	7.0	36 54.18	36 17.9	33 13.45	-28.12	-0 2.29	+11.09	-1.75	- 9.70		14 36 57.98	52 46 24.7

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.			Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.		R. A.	Dec.		
h m s		m s	m s	° "	"	m s	"		s	"	h m s	° ' "
14 37 17.2	7.2	37 51.50	37 19.7	47 24.70	-24.77	-0 2.29	+10.74	-1.75	-9.65		14 37 55.31	52 32 16.7
14 39 39.5	9.3	40 15.80	39 37.6	21 53.60	-30.71	-0 2.27	+8.89	-1.72	-9.30		14 40 19.85	50 57 40.9
14 42 18.8	8.9	42 55.96	42 14.8	59 54.50	-32.86	-0 2.27	+9.79	-1.75	-9.20		14 42 59.87	51 19 39.4
14 43 34.2	9.0	44 9.52	43 37.2	32 50.60	-25.51	-0 2.27	+10.06	-1.77	-9.25		14 44 13.31	51 46 51.2
14 46 45.6	8.9	47 20.66	46 36.9	34 20.70	-33.06	-0 2.32	+12.29	-1.85	-9.45		14 47 23.91	53 45 16.3
14 49 34.9	8.8	50 8.96	49 34.9	26 48.00	-25.66	-0 2.33	+12.09	-1.87	-9.30		14 50 12.10	53 52 57.0
14 51 0.0	9.0	51 36.06	51 1.1	22 26.35	-26.92	-0 2.30	+11.15	-1.85	-9.10		14 51 39.37	52 57 17.0
14 53 15.8	8.8	53 50.38	53 14.1	53 34.95	-28.26	-0 2.29	+10.79	-1.85	-8.90		14 53 53.74	52 26 7.4
14 55 59.9	8.7	56 34.94	55 56.9	1 36.35	-30.33	-0 2.28	+9.16	-1.83	-8.60		14 56 38.47	51 18 3.3
14 57 23.3	8.9	58 1.32	57 25.1	10 53.45	-28.99	-0 2.28	+8.89	-1.83	-8.50		14 58 4.85	51 8 47.7
15 1 40.6	9.0	2 15.12	1 39.0	25 28.80	-28.44	-0 2.29	+9.63	-1.88	-8.45		15 2 18.37	51 54 14.7
15 2 59.7	9.1	3 36.98	3 0.9	55 2.75	-28.74	-0 2.28	+8.99	-1.87	-8.30		15 3 40.31	51 24 40.3
15 4 35.9	7.5	5 9.72	4 32.4	49 15.80	-29.64	-0 2.28	+9.91	-1.88	-8.25		15 5 12.99	51 30 27.8
15 5 30.2	9.3	6 4.02	6 46.2	45 3.50	+33.48	-0 2.28	+9.09	-1.89	-8.20		15 6 7.24	51 35 42.7
15 6 45.3	8.8	7 19.02	7 51.5	9 4.15	+26.01	-0 2.28	+10.65	-1.89	-8.10		15 7 22.29	51 11 36.5
15 8 26.8	7.0	9 0.48	8 29.8	5 14.16	-25.07	-0 2.26	+7.89	-1.87	-7.90		15 9 3.92	50 14 33.3
15 11 25.3	7.0	11 58.64	11 13.0	55 46.45	-24.77	-0 2.28	+9.23	-1.92	-7.95		15 12 1.75	51 24 3.3
15 11 33.1	8.0	12 6.24	11 27.5	55 46.45	-43.73	-0 2.28	+8.68	-1.92	-7.95		15 12 9.35	51 23 43.8
15 13 49.7	8.6	14 21.30	13 33.3	15 15.50	-37.67	-0 2.29	+9.52	-1.95	-7.90		15 14 24.20	52 4 22.4
15 16 36.4	9.3	17 10.08	16 36.1	6 29.65	-27.19	-0 2.28	+10.11	-1.94	-7.64		15 17 13.10	51 13 20.3
15 17 44.3	8.9	18 20.00	17 48.9	42 15.85	-24.65	-0 2.28	+9.75	-1.95	-7.60		15 18 22.92	51 37 36.6
15 19 15.8	9.2	19 50.34	19 19.3	36 57.30	-25.22	-0 2.27	+8.72	-1.93	-7.45		15 19 53.42	50 42 54.1
15 20 32.8	8.3	21 5.60	21 44.9	41 45.85	+31.13	-0 2.28	+9.57	-1.97	-7.50		15 21 8.44	51 39 3.1
15 21 45.3	8.8	22 18.22	23 0.3	32 39.80	+33.16	-0 2.28	+9.83	-1.98	-7.50		15 22 21.00	51 48 11.7
15 23 48.2	9.0	24 21.48	23 49.3	19 2.75	-25.86	-0 2.27	+9.45	-1.97	-7.30		15 24 24.39	51 0 50.1
15 25 22.8	8.5	25 55.42	25 21.5	23 26.95	-27.28	-0 2.27	+9.24	-1.97	-7.20		15 25 58.31	50 56 24.8
15 27 12.6	8.7	27 44.60	27 8.6	45 4.00	-29.18	-0 2.27	+8.18	-1.97	-7.05		15 27 47.53	50 34 45.5
15 28 41.4	9.0	29 13.64	28 38.9	58 10.30	-28.27	-0 2.27	+8.53	-1.97	-6.95		15 29 16.58	50 21 41.0
15 30 20.4	8.6	30 51.98	30 21.8	57 28.00	-24.59	-0 2.28	+8.51	-1.98	-6.90		15 30 54.87	50 22 27.4
15 31 23.8	8.5	31 55.84	32 37.2	31 40.55	+33.41	-0 2.28	+8.57	-1.99	-6.90		15 31 58.63	50 49 13.2
15 33 20.3	9.2	33 55.54	33 23.3	40 50.35	-25.51	-0 2.29	+9.50	-2.03	-6.90		15 33 58.07	51 39 5.9
15 34 21.0	....	34 52.58	....	....	....	-0 2.27	....	-2.00	....		15 34 55.31	....
15 36 10.3	8.7	36 42.32	36 7.1	5 31.55	-28.75	-0 2.27	+7.86	-2.00	-6.70		15 36 45.13	50 14 20.9
15 37 1.1	8.6	37 32.36	38 9.3	44 37.10	+29.90	-0 2.28	+9.03	-2.01	-6.60		15 37 35.07	50 36 15.5
15 38 42.9	9.1	39 15.16	38 37.8	21 21.40	-30.07	-0 2.28	+8.79	-2.04	-6.50		15 39 17.74	50 58 31.6
15 40 2.3	8.4	40 34.04	40 0.0	1 52.40	-27.14	-0 2.28	+9.30	-2.05	-6.50		15 40 36.52	51 18 4.4
15 42 21.5	8.2	42 52.88	42 13.6	8 40.55	-31.53	-0 2.28	+9.43	-2.06	-6.35		15 42 55.34	51 11 12.8
15 44 7.8	8.3	44 40.50	44 4.2	59 39.20	-28.96	-0 2.29	+9.85	-2.07	-6.30		15 44 42.88	51 20 17.7
15 46 10.5	8.2	46 41.82	46 3.6	4 13.50	-30.61	-0 2.29	+9.67	-2.08	-6.20		15 46 44.17	51 15 42.3
15 47 12.0	8.5	47 43.22	47 11.6	7 23.70	-25.28	-0 2.29	+9.33	-2.08	-6.10		15 47 45.56	51 12 37.4
15 48 26.9	8.7	48 59.08	48 29.2	16 47.95	-24.51	-0 2.27	+8.01	-2.04	-5.90		15 49 1.69	50 3 13.2
15 49 31.9	8.9	50 2.46	49 25.5	31 2.70	-29.20	-0 2.30	+9.61	-2.11	-6.05		15 50 4.60	51 48 55.5
15 50 35.7	9.2	51 8.76	52 6.8	58 44.05	+47.24	-0 2.28	+8.11	-2.07	-5.80		15 51 11.23	50 22 29.7
15 54 13.2	9.4	54 43.48	54 8.4	31 51.85	-27.71	-0 2.29	+9.81	-2.13	-5.80		15 54 45.54	51 48 9.7
15 55 59.7	8.2	56 30.34	55 55.0	48 42.70	-28.04	-0 2.29	+9.84	-2.12	-5.65		15 56 32.44	51 31 19.2
15 57 54.7	8.5	58 24.56	57 53.6	38 25.55	-24.54	-0 2.29	+10.08	-2.14	-5.60		15 58 26.58	51 41 40.8
15 59 20.2	9.3	59 54.84	59 23.3	18 0.55	-25.29	-0 2.28	+9.25	-2.12	-5.45		15 59 57.00	51 2 4.8
16 0 42.0	9.0	1 13.60	0 40.1	21 47.85	-26.45	-0 2.29	+9.83	-2.15	-5.35		16 1 15.54	51 48 17.4
ZONE 83, JUNE 17, 1871.												
14 21 51.3	8.5	22 28.80	21 57.8	21 13.90	-24.87	-0 2.70	+8.96	-1.56	-10.55		14 22 32.99	50 58 23.3
14 23 37.6	6.0	24 12.84	23 39.0	55 15.90	-27.51	-0 2.69	+8.06	-1.56	-10.35		14 24 17.07	50 24 18.3
14 26 49.6	8.5	27 25.66	26 52.4	50 41.60	-26.47	-0 2.71	+9.35	-1.60	-10.55		14 27 29.61	51 28 55.4

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	" m s		s "		h m s	° ' "
14 29 45.1	10.0	29 11.30	29 59.3	2 31.45	+38.32	-0 2.70	+ 9.21	-1.61	-10.25	14 29 15.23	51 18 11.1
14 30 56.3	9.2	31 32.48	30 55.9	15 32.55	-29.36	-0 2.70	+ 8.81	-1.62	-10.25	14 31 36.38	51 4 2.2
14 32 20.9	8.9	32 58.58	32 26.7	47 28.65	-25.89	-0 2.69	+ 8.73	-1.62	-10.05	14 33 2.54	50 32 10.0
14 33 51.5	9.0	34 30.10	33 54.3	27 58.40	-28.22	-0 2.72	+10.21	-1.66	-10.25	14 34 33.77	51 51 39.5
14 36 19.2	7.0	36 54.44	36 22.0	33 17.80	-25.11	-0 2.73	+11.29	-1.70	-10.30	14 36 57.85	52 46 24.8
14 37 17.2	8.0	37 51.78	37 20.4	47 24.95	-24.39	-0 2.73	+10.85	-1.70	-10.25	14 37 55.20	52 32 18.2
14 39 39.5	9.4	40 16.16	39 38.7	21 56.50	-30.15	-0 2.70	+ 9.00	-1.67	- 9.85	14 40 19.83	50 57 40.0
14 42 18.8	8.5	42 56.32	42 20.6	59 59.05	-28.48	-0 2.71	+10.02	-1.70	- 9.80	14 42 59.84	51 19 40.7
14 43 34.2	8.4	44 9.82	43 38.4	32 52.65	-24.80	-0 2.71	+10.18	-1.72	- 9.85	14 44 13.22	51 46 51.2
14 46 45.6	9.0	47 20.94	46 43.6	34 26.25	-28.16	-0 2.76	+12.56	-1.80	-10.05	14 47 23.80	53 45 17.2
14 49 34.9	8.6	50 9.32	50 45.2	27 42.10	+27.01	-0 2.78	+12.35	-1.82	- 9.95	14 50 12.06	53 52 57.0
14 51 0.0	9.0	51 36.44	51 3.3	22 29.15	-25.46	-0 2.74	+11.34	-1.80	- 9.75	14 51 39.36	52 57 17.0
14 53 15.8	8.2	53 50.66	53 11.7	53 35.15	-30.36	-0 2.73	+10.89	-1.80	- 9.55	14 53 53.63	52 26 6.4
14 55 59.9	8.7	56 35.36	55 54.6	1 37.55	-32.57	-0 2.70	+ 9.21	-1.78	- 9.30	14 56 38.52	51 18 1.0
14 57 23.3	9.5	58 1.76	57 28.8	10 57.95	-26.43	-0 2.70	+ 9.05	-1.78	- 9.20	14 58 4.92	51 8 47.1
15 1 40.6	9.4	2 15.52	1 41.4	25 33.00	-26.86	-0 2.72	+ 9.77	-1.83	- 9.10	15 2 18.39	51 54 13.5
15 2 59.7	9.2	3 37.54	3 4.1	55 7.45	-26.67	-0 2.71	+ 8.10	-1.83	- 9.00	15 3 40.48	51 24 38.0
15 4 35.9	8.3	5 10.24	4 36.3	49 20.55	-26.94	-0 2.70	+10.12	-1.84	- 8.90	15 5 13.13	51 30 27.1
15 5 30.2	9.5	6 4.50	6 51.2	45 9.40	+37.05	-0 2.71	+ 9.08	-1.85	- 8.90	15 6 7.33	51 35 41.5
15 6 45.3	8.5	7 19.40	7 59.2	9 11.05	+31.85	-0 2.71	+ 8.82	-1.84	- 8.80	15 7 22.29	51 11 34.9
15 8 26.8	7.0	9 0.94	8 27.7	5 13.25	-27.11	-0 2.69	+ 7.91	-1.83	- 8.55	15 9 3.99	50 14 33.4
15 10 22.3	9.5	10 57.20	10 24.2	4 21.90	-26.37	-0 2.71	+ 9.93	-1.87	- 8.65	15 10 59.98	51 15 27.9
15 11 25.3	7.0	11 58.98	12 34.9	56 39.25	+28.59	-0 2.72	+ 9.41	-1.88	- 8.60	15 12 1.69	51 24 5.3
15 13 49.7	8.8	14 21.64	13 46.3	15 28.55	-27.70	-0 2.73	+ 9.92	-1.91	- 8.60	15 14 24.14	52 4 20.8
15 16 36.4	9.5	17 10.54	16 38.4	6 31.85	-25.67	-0 2.71	+ 9.25	-1.90	- 8.35	15 17 13.17	51 13 19.9
15 17 44.3	8.4	18 20.32	17 46.8	42 13.75	-26.56	-0 2.72	+ 9.79	-1.92	- 8.35	15 18 22.83	51 37 37.9
15 19 15.8	9.4	19 50.58	19 14.0	36 54.50	-29.67	-0 2.70	+ 8.70	-1.90	- 8.15	15 19 53.26	50 42 53.6
15 20 32.8	8.4	21 5.90	20 30.3	40 49.25	-28.20	-0 2.72	+ 9.51	-1.93	- 8.20	15 21 8.34	51 39 1.4
15 21 45.3	8.5	22 18.46	21 45.8	31 44.45	-25.82	-0 2.72	+ 9.92	-1.94	- 8.20	15 22 20.84	51 48 9.3
15 23 48.2	9.5	24 21.90	23 50.8	19 3.15	-24.98	-0 2.71	+ 9.58	-1.93	- 8.00	15 24 24.41	51 0 51.9
15 25 22.8	8.4	25 55.78	26 33.6	24 26.80	+30.41	-0 2.71	+ 9.50	-1.94	- 7.85	15 25 58.26	50 56 24.2
15 27 12.6	8.9	27 44.98	27 9.2	45 5.95	-29.02	-0 2.70	+ 8.27	-1.93	- 7.80	15 27 47.52	50 34 44.9
15 28 41.4	9.0	29 14.00	28 41.5	58 13.30	-26.48	-0 2.70	+ 8.72	-1.94	- 7.70	15 29 16.54	50 21 41.1
15 30 20.4	8.8	30 52.22	30 14.7	57 24.40	-30.54	-0 2.70	+ 8.46	-1.94	- 7.60	15 30 54.73	50 22 26.2
15 31 23.8	8.6	31 56.14	31 27.3	30 46.15	-23.23	-0 2.70	+ 8.73	-1.96	- 7.60	15 31 58.54	50 49 12.3
15 33 20.3	9.0	33 55.74	33 16.4	40 44.75	-31.13	-0 2.72	+ 9.42	-2.00	- 7.60	15 33 57.87	51 39 7.0
15 34 21.0	5.5	34 52.88	34 23.3	30 4.45	-23.87	-0 2.70	+ 8.56	-1.98	- 7.40	15 34 55.20	50 49 54.2
15 36 10.3	8.7	36 42.76	36 12.6	5 38.35	-24.66	-0 2.69	+ 8.06	-1.96	- 7.30	15 36 45.19	50 14 19.6
15 37 1.1	8.4	37 32.78	38 3.4	44 32.05	+24.80	-0 2.70	+ 8.43	-1.98	- 7.30	15 37 35.10	50 36 16.0
15 40 2.3	8.3	40 34.24	40 3.1	1 55.30	-24.88	-0 2.71	+ 9.49	-2.02	- 7.25	15 40 36.32	51 18 5.0
15 42 21.5	8.1	42 53.22	42 23.0	8 49.65	-24.17	-0 2.71	+ 9.76	-2.03	- 7.10	15 42 55.28	51 11 12.5
15 44 7.8	8.2	44 40.74	44 1.0	59 37.00	-31.67	-0 2.72	+ 9.91	-2.04	- 7.00	15 44 42.72	51 20 18.4
15 46 10.5	8.4	46 42.12	46 6.9	4 16.55	-28.13	-0 2.71	+ 9.84	-2.05	- 6.95	15 46 44.08	51 15 43.0
15 47 12.0	8.4	47 43.56	48 20.6	8 18.15	+29.60	-0 2.71	+ 9.53	-2.06	- 6.90	15 47 45.50	51 12 39.1
15 48 26.9	9.2	48 59.46	49 35.9	17 44.00	+29.84	-0 2.69	+ 9.21	-2.02	- 6.65	15 49 1.67	50 3 13.8
15 49 31.9	8.3	50 2.68	50 37.8	32 1.60	+27.70	-0 2.74	+ 9.94	-2.08	- 6.80	15 50 4.41	51 48 55.0
15 54 13.2	9.4	54 44.00	54 4.6	31 49.90	-31.11	-0 2.73	+ 9.81	-2.10	- 6.60	15 54 45.65	51 48 9.3
15 55 5.2	6.0	55 38.46	55 9.2	20 32.55	-23.54	-0 2.71	+ 8.88	-2.07	- 6.45	15 55 40.31	50 59 33.8
15 55 59.7	9.0	56 30.76	57 2.8	49 36.50	+25.42	-0 2.73	+10.23	-2.10	- 6.45	15 56 32.44	51 31 20.4
15 57 54.7	8.2	58 24.80	57 50.8	38 25.10	-26.91	-0 2.73	+10.15	-2.11	- 6.40	15 58 26.41	51 41 40.0
15 59 20.2	9.2	59 55.34	59 18.3	17 57.05	-29.71	-0 2.72	+ 9.25	-2.09	- 6.20	15 59 57.09	51 2 4.9
16 0 42.0	8.9	1 13.98	0 36.6	31 45.80	-29.53	-0 2.73	+ 9.85	-2.12	- 6.20	16 1 15.51	51 48 17.4

ZONE 84, JUNE 19, 1871.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
14 53 28.7	9.0	54 5.26	54 22.7	57 19.75	+13.85	-0 2.97	+ 9.77	-1.74	- 9.80	14 54 8.22	51 25 45.7
14 54 45.6	9.5	55 21.82	55 31.3	9 38.55	+ 7.76	-0 2.95	+ 9.00	-1.72	- 9.50	14 55 24.99	50 13 20.6
14 55 59.9	8.2	56 35.54	56 14.2	4 31.45	-17.00	-0 2.96	+10.05	-1.75	- 9.70	14 56 38.47	51 18 4.1
14 57 21.8	8.2	57 57.50	57 29.0	40 42.00	-23.05	-0 2.96	+ 8.51	-1.74	- 9.50	14 58 0.52	50 41 46.5
14 59 33.5	8.5	0 7.88	59 29.5	57 14.05	-31.24	-0 2.96	+ 8.38	-1.75	- 9.40	15 0 10.88	50 25 6.8
15 0 44.8	9.0	1 23.08	0 54.8	34 44.45	-22.84	-0 2.96	+ 9.47	-1.77	- 9.40	15 1 25.98	50 47 46.2
15 2 34.9	7.7	3 7.86	2 35.9	34 44.80	-24.18	-0 3.01	+12.63	-1.87	- 9.80	15 3 10.03	53 47 47.7
15 4 46.5	9.0	5 22.08	4 52.3	46 11.10	-23.63	-0 2.97	+ 9.56	-1.81	- 9.35	15 5 24.71	51 36 19.9
15 6 7.2	9.2	6 43.52	6 15.7	48 2.05	-22.54	-0 2.96	+ 8.90	-1.79	- 9.15	15 6 46.33	50 34 29.9
15 7 0.5	7.0	7 35.44	7 12.3	0 8.30	-18.81	-0 2.96	+ 8.15	-1.79	- 9.10	15 7 38.26	50 22 26.9
15 8 11.9	7.7	8 44.56	8 21.7	58 47.90	-17.43	-0 3.01	+12.11	-1.90	- 9.50	15 8 46.65	53 23 52.6
15 9 30.5	7.8	10 5.22	9 50.7	39 11.25	-11.72	-0 2.96	+ 9.37	-1.82	- 9.00	15 10 7.90	50 43 33.0
15 10 44.9	8.5	11 20.58	10 54.5	9 45.30	-21.32	-0 2.95	+ 8.87	-1.81	- 8.90	15 11 23.35	50 12 49.2
15 11 33.1	8.7	12 6.94	12 10.3	59 18.50	+ 2.79	-0 2.97	+10.23	-1.85	- 9.05	15 12 9.43	51 23 41.6
15 14 55.8	7.5	15 31.20	15 10.4	42 37.45	-16.83	-0 2.96	+ 8.95	-1.85	- 8.80	15 15 33.76	50 40 2.9
15 16 31.8	8.4	17 6.54	16 48.3	29 25.55	-14.66	-0 2.96	+ 9.60	-1.86	- 8.70	15 17 9.02	50 53 18.2
15 17 28.4	8.5	18 3.78	18 7.3	49 13.00	+ 2.84	-0 2.96	+ 9.35	-1.86	- 8.65	15 18 6.30	50 33 48.3
15 18 36.4	9.0	19 10.82	18 48.5	16 43.65	-18.26	-0 2.95	+ 8.18	-1.85	- 8.55	15 19 13.43	50 5 55.7
15 19 25.3	8.2	19 58.30	19 45.9	24 49.50	-10.18	-0 2.95	+ 8.82	-1.85	- 8.50	15 20 0.92	49 57 58.9
15 21 23.4	9.0	21 57.00	21 25.4	7 58.70	-25.81	-0 2.95	+ 8.45	-1.87	- 8.45	15 21 59.51	50 14 34.2
15 22 53.7	8.7	23 29.16	22 58.3	10 48.35	-25.25	-0 2.95	+ 7.97	-1.87	- 8.40	15 23 31.65	50 11 45.2
15 23 57.2	8.8	24 30.54	24 11.2	17 14.30	-15.81	-0 2.95	+ 8.32	-1.88	- 8.30	15 24 33.02	50 5 29.3
15 25 4.3	9.0	25 36.92	25 20.0	29 59.25	-13.61	-0 2.96	+ 9.67	-1.91	- 8.40	15 25 39.20	50 52 48.2
15 26 36.6	9.0	27 9.28	26 45.0	56 45.55	-19.34	-0 2.97	+ 9.61	-1.93	- 8.40	15 27 11.40	51 25 56.5
15 29 8.4	7.8	29 41.24	29 11.4	47 57.55	-24.18	-0 2.97	+ 8.86	-1.92	- 8.15	15 29 43.48	50 34 39.8
15 30 54.9	6.4	31 26.08	30 55.5	57 49.45	-24.90	-0 2.97	+ 8.62	-1.92	- 8.05	15 31 28.32	50 24 47.6
15 31 56.8	8.5	32 30.04	32 14.9	52 30.05	-12.26	-0 2.97	+ 8.83	-1.93	- 8.00	15 32 32.24	50 30 20.2
15 33 40.8	7.2	34 12.12	33 40.8	52 35.75	-25.42	-0 2.97	+ 8.65	-1.94	- 7.90	15 34 14.28	50 30 1.7
15 35 19.7	9.3	35 51.96	35 28.3	12 58.05	-19.39	-0 2.96	+ 8.52	-1.94	- 7.80	15 35 54.16	50 9 45.9
15 41 35.0	9.0	42 5.14	41 37.2	19 3.20	-22.39	-0 2.97	+ 9.64	-2.00	- 7.65	15 42 7.00	51 3 40.8
15 43 11.5	9.0	43 46.16	43 15.9	41 12.35	-24.43	-0 2.97	+ 8.61	-1.99	- 7.50	15 43 48.08	50 41 29.2
15 44 26.1	8.5	44 58.78	44 29.2	10 12.25	-24.19	-0 2.96	+ 7.88	-1.98	- 7.40	15 45 0.79	50 12 29.2
15 45 48.2	9.2	46 20.30	45 58.2	38 8.65	-17.78	-0 2.97	+ 9.18	-2.00	- 7.40	15 46 22.16	50 44 40.9
15 47 20.1	8.9	47 53.88	47 26.5	13 2.30	-22.42	-0 2.96	+ 8.50	-1.99	- 7.35	15 47 55.84	50 9 42.5
15 48 47.5	8.4	49 18.76	48 54.2	35 2.60	-19.78	-0 2.97	+ 8.56	-2.02	- 7.25	15 49 20.54	50 47 45.4
15 50 20.3	9.0	50 51.64	50 19.9	4 10.15	-25.85	-0 2.96	+ 8.78	-2.01	- 7.10	15 50 53.51	50 18 32.6
15 50 52.0	7.8	51 24.18	51 50.7	10 5.20	+21.65	-0 2.96	+ 7.90	-2.01	- 7.10	15 51 26.06	50 13 24.4
15 53 55.2	9.2	54 30.22	54 0.9	27 44.45	-23.58	-0 2.97	+ 9.18	-2.05	- 7.00	15 54 31.87	50 55 2.2
15 54 59.2	5.5	55 29.72	55 8.5	8 35.50	-17.31	-0 2.96	+ 8.71	-2.03	- 6.90	15 55 31.51	50 14 17.3
15 55 58.2	8.0	56 28.56	56 4.0	7 44.05	-20.08	-0 2.96	+ 8.50	-2.03	- 6.85	15 56 30.33	50 15 6.1
15 57 25.3	8.8	57 58.20	57 31.7	3 12.50	-21.60	-0 2.97	+ 8.67	-2.04	- 6.75	15 57 59.92	50 19 36.9
15 59 2.2	8.8	59 35.48	59 9.9	6 46.50	-20.89	-0 2.96	+ 8.37	-2.05	- 6.70	15 59 37.19	50 16 3.8
16 0 10.7	8.4	0 45.44	0 30.5	32 34.00	-12.02	-0 2.97	+ 9.25	-2.08	- 6.70	16 0 46.98	50 50 26.4
16 1 36.8	9.0	2 7.18	1 50.7	58 19.40	-12.85	-0 3.00	+11.03	-2.13	- 6.80	16 2 8.29	52 24 42.2
16 2 45.3	9.0	3 17.06	3 5.4	57 5.75	- 9.11	-0 3.00	+11.87	-2.14	- 6.75	16 3 18.14	52 26 0.9
16 4 17.0	8.4	4 46.40	4 22.3	43 19.35	-18.67	-0 3.00	+11.25	-2.16	- 6.70	16 4 47.38	52 39 36.7
16 5 12.0	6.7	5 41.48	5 26.0	52 30.85	-12.59	-0 2.97	+ 8.86	-2.08	- 6.40	16 5 43.02	50 30 30.4
16 7 27.0	9.0	7 57.34	7 23.5	9 25.00	-27.61	-0 2.96	+ 8.69	-2.08	- 6.35	16 7 58.91	50 13 21.9
16 8 49.9	8.6	9 24.54	8 56.3	39 52.80	-22.80	-0 2.97	+ 9.43	-2.11	- 6.25	16 9 25.95	50 43 0.1
16 10 9.8	8.8	10 41.16	10 13.5	22 36.10	-22.73	-0 2.96	+ 8.20	-2.08	- 6.15	16 10 42.75	50 0 16.2
16 12 17.9	9.5	12 49.76	12 17.7	7 31.15	-26.21	-0 2.96	+ 8.37	-2.10	- 6.00	16 12 51.25	50 15 18.6
16 13 20.0	9.2	13 52.78	13 28.1	3 59.90	-20.14	-0 2.97	+ 8.86	-2.11	- 5.95	16 13 54.23	50 18 56.8
16 14 9.4	9.5	14 39.18	14 24.6	34 7.45	-11.78	-0 2.97	+ 9.52	-2.13	- 6.00	16 14 40.49	50 48 58.5

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
16 16 4.0	9.1	16 36.20	16 9.2	50 34.65	-21.91	-0 2.97	+ 8.32	-2.12	- 5.85	16 16 37.55	50 32 20.7
16 17 44.8	9.3	18 16.62	17 54.2	41 53.10	-18.12	-0 2.97	+ 8.88	-2.14	- 5.80	16 18 17.90	50 41 7.2
16 19 14.5	7.5	19 45.10	19 21.9	44 54.65	-18.79	-0 2.97	+ 9.40	-2.14	- 5.70	16 19 46.37	50 38 6.1
16 20 5.2	8.0	20 35.98	20 26.9	53 48.15	- 7.31	-0 2.97	+ 9.18	-2.14	- 5.65	16 20 37.27	50 29 24.1
16 21 49.6	7.3	22 17.86	21 55.1	57 41.65	-18.15	-0 2.98	+ 9.80	-2.18	- 5.65	16 22 18.88	51 25 21.0
ZONE 85, JUNE 21, 1871.											
14 53 28.7	9.2	54 5.36	53 46.0	56 34.60	-16.72	-0 3.03	+ 9.74	-1.71	-10.15	14 54 8.29	51 25 47.6
14 55 59.9	8.7	56 35.52	56 4.6	4 11.55	-26.70	-0 3.02	+10.00	-1.72	-10.10	14 56 38.42	51 18 1.6
14 57 21.8	8.6	57 57.62	57 33.3	40 33.70	-21.27	-0 3.02	+ 8.66	-1.72	- 9.90	14 58 0.60	50 41 44.1
14 59 33.5	8.0	0 7.98	59 42.8	57 10.60	-22.19	-0 3.02	+ 8.71	-1.72	- 9.80	15 0 10.95	50 25 6.9
15 0 44.8	8.5	1 23.02	1 1.1	34 36.90	-19.13	-0 3.02	+ 9.67	-1.74	- 9.80	15 1 25.89	50 47 45.0
15 2 34.9	8.3	3 7.90	2 48.0	34 40.25	-16.25	-0 3.08	+12.98	-1.84	-10.20	15 3 10.03	53 47 47.9
15 4 46.5	9.0	5 22.02	4 58.0	46 2.30	-20.61	-0 3.03	+ 9.73	-1.78	- 9.75	15 5 24.62	51 36 19.2
15 6 7.2	9.2	6 43.52	6 21.7	47 53.80	-19.14	-0 3.02	+ 9.09	-1.76	- 9.65	15 6 46.30	50 34 29.0
15 7 0.5	8.0	7 35.48	7 16.6	59 59.55	-16.66	-0 3.02	+ 9.36	-1.76	- 9.50	15 7 38.27	50 22 26.4
15 8 11.9	7.8	8 44.60	8 24.1	58 35.60	-16.89	-0 3.08	+12.28	-1.86	- 9.90	15 8 46.66	53 23 52.9
15 9 30.5	8.5	10 5.26	9 43.8	38 52.45	-18.81	-0 3.01	+ 9.48	-1.79	- 9.45	15 10 7.92	50 43 32.1
15 10 44.9	8.9	11 20.72	10 56.9	9 34.10	-21.05	-0 3.01	+ 9.01	-1.78	- 9.30	15 11 23.46	50 12 48.3
15 11 33.1	9.0	12 7.02	12 21.0	59 13.05	+12.07	-0 3.03	+10.31	-1.82	- 9.45	15 12 9.48	51 23 43.8
15 14 55.8	....	15 31.28	15 8.4	42 23.60	-20.06	-0 3.02	+ 9.07	-1.82	- 9.20	15 15 33.81	50 40 1.0
15 16 31.8	8.7	17 6.66	16 45.5	29 9.90	-18.49	-0 3.02	+ 9.69	-1.83	- 9.20	15 17 9.11	50 53 17.3
15 17 28.4	9.1	18 3.88	17 41.9	48 37.05	-19.31	-0 3.02	+ 9.24	-1.83	- 9.10	15 18 6.37	50 33 49.3
15 18 36.4	8.8	19 10.90	18 50.3	16 32.40	-18.26	-0 3.01	+ 8.27	-1.82	- 9.00	15 19 13.48	50 5 54.3
15 19 25.3	8.2	19 58.36	19 36.7	24 29.05	-19.29	-0 3.01	+ 8.79	-1.82	- 8.95	15 20 0.95	49 57 57.5
15 21 23.4	9.1	21 57.08	21 33.9	7 53.80	-20.51	-0 3.01	+ 8.70	-1.84	- 8.90	15 21 59.56	50 14 32.0
15 22 53.7	9.0	23 29.24	23 10.4	10 46.30	-16.63	-0 3.01	+ 8.23	-1.85	- 8.80	15 23 31.69	50 11 43.4
15 23 57.2	8.5	24 30.62	24 10.2	17 1.35	-18.09	-0 3.01	+ 8.37	-1.85	- 8.75	15 24 33.07	50 5 27.4
15 25 4.3	9.1	25 37.04	25 20.6	29 47.50	-14.30	-0 3.02	+ 9.89	-1.88	- 8.80	15 25 39.29	50 52 46.8
15 26 36.6	8.8	27 9.34	26 45.4	56 32.40	-20.60	-0 3.03	+ 9.69	-1.90	- 8.80	15 27 11.43	51 25 55.8
15 29 8.4	8.7	29 41.36	29 16.0	47 48.30	-22.31	-0 3.02	+ 9.03	-1.89	- 8.60	15 29 43.58	50 34 38.4
15 30 54.9	6.8	31 26.12	31 6.0	57 44.50	-17.71	-0 3.02	+ 8.84	-1.90	- 8.45	15 31 28.33	50 24 47.3
15 31 56.8	8.7	32 30.20	32 12.9	52 14.55	-15.21	-0 3.02	+ 8.86	-1.91	- 8.45	15 32 32.37	50 30 20.1
15 33 40.8	7.8	34 12.28	33 44.0	52 25.45	-24.88	-0 3.02	+ 8.78	-1.92	- 8.40	15 34 14.41	50 29 59.9
15 35 19.7	9.1	35 52.16	35 30.0	12 47.35	-19.66	-0 3.01	+ 8.64	-1.91	- 8.30	15 35 54.34	50 9 43.7
15 39 4.3	8.7	39 36.00	....	....	....	-0 3.03	....	-1.98	....	15 39 37.71	....
15 41 35.0	9.0	42 5.24	41 45.5	18 58.15	-17.12	-0 3.01	+ 9.88	-1.98	- 8.16	15 42 7.08	51 3 38.6
15 43 11.5	8.8	43 46.26	43 25.3	41 7.45	-18.39	-0 3.01	+ 8.81	-1.97	- 8.00	15 43 48.16	50 41 27.6
15 44 26.1	8.6	44 59.00	44 44.0	10 11.10	-13.27	-0 3.00	+ 8.13	-1.96	- 7.96	15 45 0.99	50 12 28.8
15 45 48.2	8.8	46 20.40	46 4.8	38 0.25	-13.65	-0 3.01	+ 9.33	-1.98	- 7.90	15 46 22.24	50 44 40.9
15 47 20.1	9.0	47 54.14	47 39.3	13 0.75	-13.11	-0 3.00	+ 8.75	-1.97	- 7.75	15 47 56.08	50 9 41.0
15 48 47.5	8.6	49 18.94	49 2.5	34 57.80	-14.41	-0 3.01	+ 9.81	-2.00	- 7.75	15 49 20.70	50 47 44.1
15 50 20.3	9.0	50 51.72	50 35.3	4 10.50	-14.28	-0 3.00	+ 9.11	-1.99	- 7.60	15 50 53.57	50 18 31.4
15 50 52.0	8.0	51 24.34	51 13.9	9 21.80	- 9.20	-0 3.00	+ 9.13	-1.99	- 7.60	15 51 26.20	50 13 25.4
15 53 55.2	9.1	54 30.30	54 11.5	27 42.15	-16.38	-0 3.01	+ 9.40	-2.03	- 7.50	15 54 31.93	50 54 59.1
15 54 59.2	6.5	55 29.88	55 7.1	8 20.25	-20.16	-0 3.00	+ 8.74	-2.01	- 7.35	15 55 31.65	50 14 17.1
15 55 58.2	7.0	56 28.58	56 17.0	7 42.20	-10.25	-0 3.00	+ 8.75	-2.02	- 7.30	15 56 30.32	50 15 5.4
15 57 25.3	8.7	57 58.30	57 37.8	3 37.00	+13.95	-0 3.01	+ 9.02	-2.02	- 7.25	15 58 0.00	50 19 35.5
16 16 4.0	8.8	16 36.26	16 17.4	50 28.70	-16.61	-0 3.01	+ 8.52	-2.11	- 6.40	16 16 37.58	50 32 19.4
16 17 44.8	9.0	18 16.68	17 54.3	41 40.40	-19.62	-0 3.01	+ 8.92	-2.12	- 6.30	16 18 17.94	50 41 5.7
16 19 14.5	7.2	19 45.28	19 20.8	44 40.70	-21.48	-0 3.01	+ 9.48	-2.13	- 6.20	16 19 46.52	50 38 4.7
16 20 5.2	7.6	20 36.12	20 14.7	53 24.85	-18.82	-0 3.01	+ 9.09	-2.13	- 6.20	16 20 37.38	50 29 23.0
16 21 49.6	7.5	22 17.90	22 0.4	57 32.95	-15.09	-0 3.01	+ 9.96	-2.16	- 6.20	16 22 18.91	51 25 20.1

ZONE 86, JUNE 25, 1871.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
15 9 57.8	8.5	10 32.54	10 8.8	0 53.80	-22.67	-0 3.36	+ 8.26	-1.72	-10.20	15 10 34.98	50 21 25.3
15 11 24.0	8.7	11 56.28	11 24.6	9 35.05	-25.62	-0 3.44	+ 13.12	-1.83	-10.70	15 11 57.79	54 12 45.8
15 13 2.3	9.3	13 34.16	13 4.6	19 17.65	-23.44	-0 3.45	+ 13.98	-1.87	-10.80	15 13 35.37	55 3 6.6
15 15 3.2	9.3	15 40.06	15 0.7	31 35.40	-35.13	-0 3.33	+ 7.65	-1.74	-9.90	15 15 42.51	49 50 32.3
15 15 48.7	6.0	16 22.84	16 3.2	57 55.80	-16.53	-0 3.39	+ 10.91	-1.81	-10.25	15 16 24.67	52 24 33.6
15 18 39.6	8.7	19 13.10	18 42.4	42 26.85	-26.90	-0 3.35	+ 8.83	-1.79	-9.90	15 19 15.27	50 39 51.2
15 21 11.9	7.0	21 45.38	21 5.9	20 11.05	-34.33	-0 3.36	+ 8.51	-1.80	-9.85	15 21 47.41	51 2 0.0
15 22 25.8	9.4	23 0.42	22 45.7	18 13.70	-12.77	-0 3.36	+ 9.61	-1.81	-9.80	15 23 2.41	51 4 20.3
15 23 18.8	8.0	23 52.86	23 42.4	37 42.05	-9.20	-0 3.35	+ 9.12	-1.81	-9.70	15 23 54.90	50 44 55.4
15 24 41.3	9.0	25 16.32	24 47.6	29 37.65	-25.03	-0 3.35	+ 9.57	-1.82	-9.70	15 25 18.31	50 52 44.8
15 28 33.3	9.5	29 8.22	28 50.8	38 20.50	-14.56	-0 3.39	+ 11.45	-1.90	-9.80	15 29 9.66	52 44 15.3
15 30 38.3	8.5	31 10.82	30 50.7	26 16.05	-17.13	-0 3.38	+ 9.02	-1.87	-9.60	15 31 12.42	51 56 15.5
15 32 0.4	6.2	32 32.68	32 7.1	53 41.25	-21.55	-0 3.39	+ 11.10	-1.91	-9.65	15 32 34.10	52 28 48.3
15 32 39.8	9.0	33 13.02	33 9.0	27 33.05	-3.48	-0 3.36	+ 9.36	-1.87	-9.40	15 33 14.80	50 55 13.3
15 36 55.1	8.9	37 26.06	36 50.0	3 41.00	-30.51	-0 3.38	+ 10.73	-1.93	-9.40	15 37 27.41	52 18 40.9
15 38 53.5	5.5	39 25.72	39 2.2	37 12.65	-19.66	-0 3.39	+ 11.12	-1.96	-9.40	15 39 26.90	52 45 21.0
15 40 46.9	9.5	41 20.52	40 53.4	42 30.00	-22.72	-0 3.39	+ 11.02	-1.96	-9.30	15 41 21.69	52 40 1.1
15 42 27.6	7.6	42 58.92	42 41.3	50 36.15	-14.80	-0 3.38	+ 10.53	-1.97	-9.20	15 43 0.09	52 32 3.0
15 43 20.7	8.0	43 53.24	.....	.....	.....	-0 3.38	.....	-1.97	.....	15 43 54.41	.....
15 46 30.8	8.0	47 3.20	46 45.7	13 44.90	-14.84	-0 3.37	+ 10.83	-1.98	-9.00	15 47 4.39	52 8 55.8
15 47 49.1	8.2	48 21.28	48 3.7	25 2.90	-14.99	-0 3.37	+ 9.81	-1.98	-8.90	15 48 22.48	51 57 37.2
15 49 51.6	8.5	50 21.84	49 54.9	18 42.40	-22.34	-0 3.41	+ 11.70	-2.03	-8.95	15 50 22.68	53 3 52.8
15 51 9.2	9.0	51 39.82	51 24.9	36 48.35	-12.46	-0 3.38	+ 11.11	-2.03	-8.85	15 51 40.73	52 45 56.6
15 54 24.1	8.2	54 55.54	54 36.9	19 22.50	-16.16	-0 3.35	+ 9.81	-2.00	-8.65	15 54 56.82	51 3 18.6
15 55 25.2	9.2	55 56.66	55 45.6	18 8.80	-9.43	-0 3.37	+ 10.68	-2.02	-8.60	15 55 57.68	52 4 40.3
15 56 47.2	9.0	57 19.00	57 6.3	4 54.20	-10.79	-0 3.37	+ 11.31	-2.04	-8.50	15 57 19.93	52 17 54.7
15 57 33.0	8.2	58 3.86	57 58.5	54 38.00	-4.55	-0 3.38	+ 11.47	-2.05	-8.50	15 58 4.72	52 28 17.5
15 59 8.1	9.4	59 38.64	59 17.1	48 10.85	-18.06	-0 3.38	+ 11.16	-2.06	-8.45	15 59 39.44	52 34 31.4
16 0 34.5	8.5	1 6.06	0 47.6	53 43.05	-15.57	-0 3.38	+ 11.18	-2.06	-8.35	16 1 6.86	52 29 2.2
16 1 37.8	9.5	2 8.76	1 52.5	55 49.80	-13.73	-0 3.38	+ 10.48	-2.07	-8.30	16 2 9.54	52 26 57.0
16 2 35.5	8.3	3 6.02	2 53.9	43 36.55	-10.15	-0 3.38	+ 11.38	-2.08	-8.30	16 3 6.73	52 39 15.0
16 4 45.2	8.4	5 18.10	4 55.4	24 44.25	-19.33	-0 3.37	+ 10.84	-2.07	-8.10	16 5 18.95	51 57 58.4
16 7 1.7	8.3	7 31.68	7 13.3	55 6.00	-15.50	-0 3.38	+ 10.36	-2.10	-8.05	16 7 32.35	52 27 40.8
16 8 51.2	8.8	9 21.36	8 56.7	17 46.85	-20.99	-0 3.37	+ 10.48	-2.09	-7.95	16 9 22.11	52 4 55.2
16 10 30.0	8.8	11 0.72	10 42.3	5 52.05	-15.56	-0 3.37	+ 10.33	-2.10	-7.90	16 11 1.39	52 16 55.9
16 11 33.5	8.9	12 3.94	11 49.1	2 28.75	-12.50	-0 3.38	+ 10.80	-2.11	-7.80	16 12 4.57	52 20 23.1
16 16 50.6	8.2	17 22.10	17 13.7	15 6.90	-7.15	-0 3.36	+ 10.07	-2.13	-7.55	16 17 22.70	52 7 51.5
16 19 9.1	9.5	19 42.20	19 21.2	16 14.75	-18.23	-0 3.34	+ 9.10	-2.10	-7.35	16 19 43.06	51 6 32.5
16 19 53.2	9.2	20 25.60	20 17.4	42 8.05	-7.03	-0 3.35	+ 10.05	-2.13	-7.35	16 20 26.27	51 40 51.6
16 21 20.2	6.5	21 49.72	21 29.4	22 48.30	-17.28	-0 3.36	+ 10.43	-2.14	-7.30	16 21 50.28	52 0 2.0
16 22 30.2	9.4	22 59.88	23 0.8	48 9.15	+ 0.76	-0 3.37	+ 11.27	-2.17	-7.35	16 23 0.26	52 35 0.3
16 24 9.9	9.2	24 40.26	24 26.7	54 47.35	-11.71	-0 3.35	+ 10.40	-2.14	-7.10	16 24 40.91	51 28 9.6
16 25 1.2	....	25 31.56	25 24.8	42 7.80	-5.83	-0 3.35	+ 10.04	-2.15	-7.10	16 25 32.14	51 40 54.9

ZONE 87, JUNE 26, 1871.

15 9 57.8	8.4	10 32.62	10 12.3	0 56.75	-17.90	-0 3.42	+ 8.15	-1.70	-10.40	15 10 35.02	50 21 25.7
15 11 24.0	9.0	11 56.34	11 37.6	9 45.45	-15.11	-0 3.49	+ 13.01	-1.81	-10.90	15 11 57.82	54 12 44.5
15 13 2.3	9.3	13 34.28	13 9.8	19 20.35	-19.40	-0 3.52	+ 13.75	-1.85	-10.95	15 13 35.44	55 3 6.4
15 15 3.2	9.1	15 40.22	15 11.4	31 44.30	-25.68	-0 3.41	+ 7.68	-1.72	-10.10	15 15 42.61	49 50 31.5
15 18 39.6	9.0	19 13.20	18 48.6	42 31.45	-21.55	-0 3.41	+ 8.77	-1.76	-10.10	15 19 15.34	50 39 50.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
15 21 11.9	7.0	21 45.44	21 24.4	20 26.95	-18.25	-0 3.42	+ 8.68	-1.78	-10.05	15 21 47.43	51 1 59.0
15 22 25.8	9.5	23 0.62	22 41.9	18 8.60	-16.24	-0 3.42	+ 9.37	-1.80	-10.00	15 23 2.56	51 4 20.4
15 23 18.8	7.8	23 53.00	23 32.5	37 31.65	-17.96	-0 3.41	+ 8.84	-1.79	- 9.95	15 23 55.00	50 44 55.4
15 24 41.3	8.8	25 16.34	24 59.9	29 48.45	-14.30	-0 3.41	+ 9.60	-1.80	- 9.90	15 25 18.29	50 52 43.5
15 28 33.3	9.0	29 8.34	28 37.4	38 7.65	-25.86	-0 3.44	+10.95	-1.88	-10.00	15 29 9.75	52 44 15.0
15 28 52.2	9.2	29 25.18	29 55.8	36 36.40	+25.59	-0 3.44	+10.71	-1.88	-10.00	15 29 26.58	52 46 37.5
15 30 38.3	9.0	31 10.96	30 49.6	26 13.90	-18.24	-0 3.44	+ 8.81	-1.86	- 9.80	15 31 12.51	51 56 15.0
15 32 0.4	6.5	32 32.74	32 16.1	53 47.55	-13.97	-0 3.44	+11.02	-1.89	- 9.85	15 32 34.13	52 28 48.2
15 32 39.8	9.0	33 13.12	33 2.4	27 24.75	- 9.32	-0 3.42	+ 9.11	-1.85	- 9.60	15 33 14.86	50 55 14.2
15 34 28.1	9.1	35 0.70	34 28.7	23 54.05	-27.25	-0 3.44	+10.36	-1.89	- 9.65	15 35 2.15	51 58 28.6
15 34 47.7	8.6	35 19.70	34 49.8	23 54.05	-25.46	-0 3.44	+10.39	-1.89	- 9.65	15 35 21.14	51 58 30.6
15 36 55.1	...	37 26.24	37 1.3	3 46.80	-21.05	-0 3.43	+10.72	-1.91	- 9.50	15 37 27.56	52 18 43.3
15 38 53.5	5.4	39 25.80	39 3.1	37 10.50	-18.99	-0 3.44	+10.93	-1.94	- 9.60	15 39 26.95	52 45 22.3
15 40 46.9	9.3	41 20.66	40 54.5	42 30.70	-21.96	-0 3.44	+10.86	-1.95	- 9.50	15 41 21.79	52 39 59.7
15 42 27.6	7.8	42 59.00	42 34.1	50 29.40	-20.94	-0 3.44	+10.26	-1.95	- 9.40	15 43 0.13	53 32 2.0
15 43 20.7	8.8	43 53.34	43 33.8	54 41.85	-18.95	-0 3.44	+11.19	-1.96	- 9.35	15 43 54.46	52 27 52.8
15 43 55.6	7.5	44 27.40	44 17.6	59 27.25	- 8.64	-0 3.41	+ 9.07	-1.90	- 9.05	15 44 29.01	50 23 16.1
15 46 30.8	8.6	47 3.22	46 38.9	13 39.45	-20.61	-0 3.44	+10.56	-1.96	- 9.20	15 47 4.36	52 8 54.0
15 47 49.1	8.7	48 21.30	47 58.0	24 57.35	-19.85	-0 3.44	+10.72	-1.96	- 9.10	15 48 22.45	51 57 37.5
15 49 51.6	8.3	50 22.02	49 54.1	18 39.45	-23.17	-0 3.45	+11.51	-2.01	- 9.15	15 50 22.84	53 3 53.4
15 51 9.2	8.9	51 39.84	51 16.8	36 38.00	-19.23	-0 3.43	+10.80	-2.01	- 9.05	15 51 40.72	52 45 58.6
15 54 24.1	8.7	54 55.56	54 34.1	19 19.15	-18.68	-0 3.41	+ 9.63	-1.98	- 8.75	15 54 56.80	51 3 18.1
15 56 47.2	8.8	57 19.12	56 52.7	4 42.25	-22.41	-0 3.43	+10.97	-2.02	- 8.70	15 57 20.01	52 17 53.3
15 57 33.0	8.0	58 3.98	57 46.1	54 25.95	-15.07	-0 3.43	+11.18	-2.03	- 8.70	15 58 4.81	52 28 17.4
15 59 8.1	9.3	59 38.72	59 9.0	48 1.90	-24.95	-0 3.43	+10.84	-2.05	- 8.65	15 59 39.48	52 34 31.8
16 0 34.5	8.7	1 6.04	0 43.4	53 37.60	-19.02	-0 3.43	+10.96	-2.05	- 8.60	16 1 6.80	52 29 2.6
16 1 37.8	9.2	2 8.76	1 45.2	55 42.65	-19.88	-0 3.43	+10.23	-2.05	- 8.50	16 2 9.51	52 26 56.4
16 2 35.5	8.5	3 6.10	2 41.3	43 24.70	-20.80	-0 3.43	+11.04	-2.07	- 8.50	16 3 6.77	52 39 14.5
16 4 45.2	8.9	5 18.22	4 56.4	24 43.80	-19.00	-0 3.43	+10.70	-2.05	- 8.35	16 5 19.03	51 57 57.7
16 7 1.7	8.7	7 31.76	7 5.9	54 59.50	-21.82	-0 3.43	+11.23	-2.08	- 8.30	16 7 32.40	52 27 40.5
16 8 51.2	8.8	9 21.38	8 51.4	17 40.05	-25.49	-0 3.43	+10.23	-2.08	- 8.15	16 9 22.08	52 4 56.0
16 10 30.0	8.9	11 0.76	10 36.2	5 46.00	-20.81	-0 3.43	+10.08	-2.09	- 8.10	16 11 1.38	52 16 55.1
16 11 33.5	8.8	12 4.06	11 39.9	2 18.15	-20.44	-0 3.43	+10.50	-2.10	- 8.05	16 12 4.65	52 20 24.1
16 16 50.6	8.5	17 22.28	17 1.6	14 56.45	-17.57	-0 3.43	+10.93	-2.12	- 7.75	16 17 22.82	52 7 51.1
16 17 58.8	8.7	18 28.92	18 8.0	59 32.90	-17.63	-0 3.42	+11.09	-2.12	- 7.75	16 18 29.40	52 23 15.1
16 19 16.8	9.0	19 48.60	19 25.2	20 50.20	-20.35	-0 3.40	+ 8.81	-2.09	- 7.55	16 19 49.41	51 1 53.3
16 19 53.2	8.8	20 25.75	20 34.7	42 21.10	+ 7.72	-0 3.41	+ 9.98	-2.12	- 7.60	16 20 26.37	51 40 51.9
16 22 30.2	9.0	23 0.02	22 34.6	47 46.20	-21.34	-0 3.42	+10.87	-2.16	- 7.55	16 23 0.36	52 34 59.5
16 27 2.3	9.5	27 32.44	27 4.6	38 50.55	-23.81	-0 3.41	+10.17	-2.15	- 7.25	16 27 32.93	51 43 53.7
ZONE 88, JUNE 27, 1871.											
15 10 22.3	9.8	10 57.71	10 41.7	7 0.60	-13.84	-0 3.56	+ 9.40	-1.71	-10.70	15 10 59.80	51 15 27.1
15 11 29.7	9.3	12 2.94	11 45.1	39 35.70	-14.90	-0 3.59	+11.46	-1.75	-10.90	15 12 4.66	52 42 53.0
15 15 5.0	9.2	15 38.03	15 1.3	28 40.55	-31.31	-0 3.58	+10.15	-1.75	-10.65	15 15 39.85	51 53 31.6
15 17 23.3	...	17 55.94	18 12.4	52 18.60	+13.48	-0 3.62	+11.77	-1.81	-10.75	15 17 57.30	53 30 40.5
15 18 38.2	9.0	19 11.44	19 3.2	46 50.50	- 6.88	-0 3.59	+10.77	-1.80	-10.60	15 19 13.00	52 35 47.7
15 20 33.5	8.2	21 7.10	20 47.5	16 1.75	-16.64	-0 3.58	+ 9.98	-1.79	-10.45	15 21 8.73	52 6 26.6
15 22 17.9	8.0	22 50.92	22 30.5	53 11.35	-17.17	-0 3.59	+10.90	-1.82	-10.45	15 22 52.41	52 29 17.8
15 23 43.4	...	24 18.70	23 59.8	11 2.50	-16.73	-0 3.54	+ 8.03	-1.76	-10.05	15 24 20.70	50 11 25.1
15 25 14.4	9.4	25 49.48	25 32.0	40 34.35	-15.32	-0 3.55	+ 8.46	-1.79	-10.05	15 25 51.32	50 41 55.5
15 26 16.9	...	26 49.62	26 42.8	51 14.90	- 5.59	-0 3.62	+11.41	-1.87	-10.40	15 26 50.74	53 31 27.5
15 31 12.9	8.5	31 44.88	31 45.6	31 58.30	+ 0.65	-0 3.63	+12.13	-1.91	-10.25	15 31 45.79	53 50 52.6
15 34 28.1	9.0	35 0.94	34 20.6	23 46.95	-34.32	-0 3.58	+10.19	-1.88	- 9.90	15 35 2.26	51 58 28.3

JOURNAL OF ZONE OBSERVATIONS.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
15 34 47.7	8.2	35 19.82	34 42.8	23 46.95	-31.51	-0 3.58	+10.26	-1.88	-9.90	15 35 21.13	51 58 31.3
15 37 30.5	8.5	38 2.58	37 44.0	50 47.65	-15.65	-0 3.59	+10.59	-1.91	-9.85	15 38 3.69	52 31 47.6
15 39 50.3	9.2	40 22.04	39 57.0	58 19.80	-20.60	-0 3.62	+11.81	-1.95	-9.85	15 40 22.85	53 24 12.4
15 41 23.8	7.0	41 56.14	41 56.0	18 35.40	-16.69	-0 3.61	+11.64	-1.95	-9.75	15 41 57.00	53 4 1.0
15 42 58.5	8.3	43 31.54	43 12.7	0 47.75	-15.87	-0 3.59	+10.25	-1.94	-9.70	15 43 32.56	52 21 48.6
15 43 55.1	9.0	44 27.26	44 14.9	2 13.15	-10.15	-0 3.62	+11.63	-1.97	-9.70	15 44 27.99	53 20 30.6
15 44 57.9	9.2	45 28.12	45 25.8	19 12.10	-1.87	-0 3.63	+12.87	-2.00	-9.70	15 45 28.64	54 3 41.5
15 47 22.6	9.5	47 52.16	47 38.0	5 46.35	-11.73	-0 3.61	+11.23	-1.99	-9.50	15 47 52.84	53 16 56.6
15 47 22.6	7.8	47 52.92	47 38.0	5 46.35	-12.31	-0 3.61	+11.22	-1.99	-9.50	15 47 53.60	53 16 56.1
15 49 7.4	10.0	49 38.18	49 20.8	41 27.85	-14.24	-0 3.62	+11.76	-2.01	-9.50	15 49 38.71	53 41 13.7
15 50 35.7	9.5	51 9.94	50 46.6	0 2.65	-20.54	-0 3.55	+7.96	-1.92	-9.05	15 51 11.29	50 22 29.7
15 54 44.5	9.3	55 16.62	55 28.2	11 53.15	+10.05	-0 3.56	+9.31	-1.96	-8.90	15 55 17.70	51 11 12.5
15 55 56.3	8.4	56 30.70	56 14.7	13 12.00	-13.87	-0 3.56	+9.58	-1.97	-8.85	15 56 31.76	51 9 30.4
15 56 36.6	8.1	57 8.56	57 7.7	12 48.40	-0.78	-0 3.56	+9.55	-1.98	-8.85	15 57 9.60	51 10 7.3
15 58 25.0	6.0	58 53.84	58 34.5	6 54.50	-15.95	-0 3.61	+11.54	-2.05	-8.95	15 58 54.28	53 15 48.4
15 59 38.2	8.5	0 6.86	59 50.0	49 9.95	-13.88	-0 3.62	+12.23	-2.07	-9.00	16 0 7.18	53 33 36.0
16 0 49.8	8.5	1 21.84	1 12.4	18 50.00	-7.81	-0 3.61	+11.73	-2.06	-8.95	16 1 22.27	53 4 2.0
16 2 41.9	8.6	3 11.26	2 50.5	44 52.35	-17.05	-0 3.62	+12.45	-2.08	-8.90	16 3 11.51	53 37 51.7
16 5 43.7	8.2	6 13.20	5 52.4	8 51.20	-17.21	-0 3.61	+12.82	-2.09	-8.70	16 6 13.49	53 13 54.2
16 6 55.5	7.9	7 25.32	6 54.8	0 35.55	-25.15	-0 3.62	+11.10	-2.10	-8.65	16 7 25.55	53 22 0.6
16 7 44.1	8.5	8 14.46	8 8.9	5 48.60	-4.95	-0 3.54	+8.17	-2.01	-8.30	16 8 15.51	50 17 5.5
16 8 49.9	9.0	9 25.18	9 3.0	39 42.50	-19.43	-0 3.55	+9.35	-2.02	-8.25	16 9 26.10	50 42 58.6
16 10 9.8	9.2	10 41.70	10 25.7	22 31.55	-14.22	-0 3.54	+8.21	-2.01	-8.15	16 10 42.78	50 0 14.2
16 16 44.5	7.0	17 14.50	16 57.3	2 39.25	-14.53	-0 3.60	+10.63	-2.11	-8.10	16 17 14.83	52 20 10.7
16 17 58.8	9.5	18 29.11	18 16.1	59 42.85	-10.97	-0 3.60	+11.20	-2.12	-8.05	16 18 29.41	52 23 11.6
16 19 3.1	9.5	19 31.30	19 24.8	33 4.35	-5.30	-0 3.63	+12.32	-2.16	-8.10	16 19 31.18	53 49 57.2
16 20 50.0	7.0	21 20.14	20 58.4	48 20.05	-18.23	-0 3.60	+11.01	-2.14	-7.90	16 21 20.34	52 34 28.1
16 24 9.9	8.8	24 40.36	24 14.8	54 36.20	-22.04	-0 3.58	+10.09	-2.10	-7.65	16 24 40.82	51 28 8.5
16 25 1.2	5.8	25 31.80	25 20.5	42 1.90	-9.69	-0 3.58	+9.87	-2.13	-7.75	16 25 32.17	51 40 55.1
16 27 2.3	9.5	27 32.50	28 7.8	39 44.25	+30.23	-0 3.58	+10.37	-2.14	-7.45	16 27 32.83	51 43 54.1
16 28 28.9	9.0	28 57.90	28 59.2	7 53.45	+1.08	-0 3.62	+11.73	-2.20	-7.60	16 28 57.76	53 15 17.4
16 30 31.9	9.0	31 2.80	30 37.7	10 44.65	-20.78	-0 3.61	+11.01	-2.20	-8.45	16 31 2.65	53 12 3.5
16 31 43.7	9.3	32 18.04	32 3.4	51 29.20	-12.56	-0 3.58	+9.52	-2.15	-7.30	16 32 18.36	51 31 27.2
16 32 46.9	8.5	33 16.90	32 58.3	12 20.80	-16.49	-0 3.62	+11.46	-2.22	-7.40	16 33 16.72	53 10 33.9
16 32 49.2	8.0	33 17.52	32 57.6	12 22.80	-15.41	-0 3.62	+11.47	-2.22	-7.40	16 33 17.34	53 10 32.8
16 39 20.4	9.0	39 50.10	39 38.7	34 0.20	-9.31	-0 3.64	+12.53	-2.27	-7.10	16 39 49.61	53 49 5.2
16 42 27.9	9.5	42 58.92	42 38.7	33 30.00	-16.48	-0 3.64	+12.34	-2.28	-6.90	16 42 58.38	53 49 29.1
16 46 5.9	8.9	46 34.32	46 18.2	43 56.25	-13.20	-0 3.63	+12.30	-2.29	-6.75	16 46 33.79	53 39 7.5
16 50 13.8	9.0	50 41.96	50 18.9	4 21.15	-19.08	-0 3.62	+11.96	-2.29	-6.50	16 50 41.49	53 18 38.1
16 51 13.8	9.0	51 43.74	51 29.2	12 48.25	-12.02	-0 3.62	+11.60	-2.29	-6.40	16 51 43.29	53 10 18.1
ZONE 89, JUNE 29, 1871.											
14 22 34.4	....	23 13.40	23 0.5	24 52.10	-11.47	-0 4.05	+8.83	-1.31	-12.20	14 23 16.60	49 57 25.7
14 44 27.5	7.5	45 4.42	44 40.6	0 51.70	-20.99	-0 4.07	+8.17	-1.48	-11.70	14 45 6.90	50 21 21.1
14 47 13.5	9.0	47 50.40	47 25.8	6 32.50	-19.86	-0 4.14	+12.34	-1.58	-12.30	14 47 52.00	54 15 45.7
14 49 22.1	8.9	49 56.96	49 34.8	14 10.50	-17.98	-0 4.14	+12.85	-1.59	-12.20	14 49 58.52	54 8 10.7
14 52 31.9	8.7	53 6.42	52 39.4	28 37.70	-21.99	-0 4.15	+12.43	-1.61	-12.05	14 53 7.92	53 53 39.9
14 54 35.0	8.8	55 10.18	54 46.4	6 18.15	-19.67	-0 4.14	+11.30	-1.61	-11.90	14 55 11.76	53 16 1.4
14 57 35.1	9.5	58 9.84	57 43.4	16 47.85	-21.40	-0 4.15	+12.21	-1.65	-11.90	14 58 11.15	54 5 31.6
15 1 40.6	9.5	2 16.44	1 51.6	28 5.95	-21.15	-0 4.11	+10.25	-1.62	-11.45	15 2 18.13	51 54 13.2
15 3 40.6	9.4	4 19.28	3 57.8	12 29.35	-18.63	-0 4.09	+9.41	-1.62	-11.25	15 4 21.07	51 9 52.2
15 5 32.1	7.8	6 5.40	5 47.2	29 14.95	-15.18	-0 4.12	+11.67	-1.67	-11.50	15 6 6.77	52 53 12.2
15 8 3.2	8.0	8 37.88	8 14.3	56 24.55	-19.43	-0 4.14	+11.48	-1.70	-11.45	15 8 30.04	53 25 59.5

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
15 9 51.7	9.0	10 25.98	10 1.0	19 11.60	-20.77	-0 4.14	+11.78	-1.71	-11.35	15 10 27.17	53 3 11.6
15 11 25.3	7.3	12 0.10	11 43.2	58 22.55	-14.57	-0 4.11	+ 9.89	-1.68	-10.05	15 12 1.62	51 24 6.7
15 14 39.8	9.0	15 12.04	14 46.0	21 35.00	-21.12	-0 4.16	+12.07	-1.77	-11.30	15 15 12.86	54 0 49.5
15 17 2.8	7.3	17 35.56	17 8.6	59 51.95	-21.74	-0 4.18	+13.27	-1.80	-11.30	15 17 36.20	54 22 33.8
15 19 48.4	8.9	20 19.83	19 59.5	14 51.55	-16.45	-0 4.16	+13.06	-1.81	-11.15	15 20 20.48	54 7 40.1
15 22 35.4	7.0	23 8.02	22 44.0	55 5.65	-19.29	-0 4.18	+12.24	-1.84	-11.10	15 23 8.49	54 27 23.1
15 26 36.6	8.9	27 10.26	26 44.2	56 27.65	-22.49	-0 4.11	+ 9.39	-1.78	-10.50	15 27 11.39	51 25 56.8
15 29 38.3	8.9	30 10.32	29 42.0	52 24.25	-23.27	-0 4.16	+12.00	-1.85	-10.60	15 30 10.86	53 30 2.7
15 31 25.4	6.5	31 57.56	31 38.8	2 24.25	-14.94	-0 4.19	+12.73	-1.89	-10.75	15 31 57.82	54 20 12.2
15 33 48.7	7.2	34 19.24	33 56.9	27 27.20	-17.72	-0 4.20	+13.29	-1.92	-10.70	15 34 19.28	54 55 7.7
15 36 31.9	9.7	37 5.00	36 41.0	17 10.10	-20.39	-0 4.13	+10.35	-1.85	-10.25	15 37 5.74	52 5 20.4
15 38 53.5	7.0	39 26.34	39 4.0	37 12.25	-18.66	-0 4.13	+11.07	-1.89	-10.25	15 39 26.85	52 45 21.4
15 40 46.9	9.2	41 21.30	40 54.7	42 29.95	-22.30	-0 4.13	+10.94	-1.90	-10.15	15 41 21.79	52 40 0.6
15 46 59.2	8.7	47 31.72	47 12.3	44 56.30	-16.28	-0 4.14	+11.58	-1.93	- 9.90	15 47 32.08	52 37 42.9
15 50 35.7	9.5	51 10.36	50 47.9	0 4.65	-19.84	-0 4.11	+ 8.04	-1.89	- 9.45	15 51 11.18	50 22 29.0
15 54 24.1	9.0	54 56.00	54 37.7	19 21.65	-15.90	-0 4.12	+ 9.79	-1.93	- 9.40	15 54 56.58	51 3 18.9
15 56 36.6	8.8	57 9.14	56 49.4	12 29.95	-17.07	-0 4.13	+ 9.46	-1.95	- 9.30	15 57 9.64	51 10 9.8
15 59 2.2	9.3	59 36.48	59 12.3	6 29.95	-21.38	-0 4.11	+ 8.27	-1.93	- 9.10	15 59 37.16	50 16 5.3
16 1 9.5	9.0	1 41.99	1 24.2	59 19.50	-15.02	-0 4.15	+11.20	-2.01	- 9.25	16 1 42.08	52 23 25.5
16 2 45.3	9.2	3 18.04	2 56.9	56 43.90	-17.77	-0 4.15	+10.58	-2.02	- 9.20	16 3 18.09	52 25 58.2
16 5 11.2	8.9	5 44.26	5 24.9	19 6.90	-16.86	-0 4.13	+ 9.75	-1.99	- 8.95	16 5 44.61	51 3 36.3
16 7 19.3	9.3	7 51.14	7 29.3	13 48.25	-18.91	-0 4.13	+ 9.71	-2.00	- 8.85	16 7 51.44	51 8 53.6
ZONE 90, JUNE 30, 1871.											
15 10 22.3	10.0	10 58.10	10 44.0	7 0.20	-12.20	-0 4.13	+ 9.58	-1.65	-11.25	15 10 59.68	51 15 29.0
15 11 29.7	8.8	12 3.33	11 58.3	39 44.90	- 4.19	-0 4.16	+11.78	-1.69	-11.40	15 12 4.54	52 42 54.7
15 15 5.0	8.8	15 38.36	15 14.7	28 53.85	-20.22	-0 4.15	+10.60	-1.70	-11.15	15 15 39.66	51 53 29.7
15 15 39.4	9.0	16 12.88	16 42.0	11 7.00	+24.10	-0 4.17	+11.26	-1.73	-11.35	15 16 13.87	53 12 1.4
15 17 23.3	8.5	17 56.32	17 39.5	51 48.05	-13.81	-0 4.18	+11.85	-1.75	-11.35	15 17 57.18	53 30 43.6
15 18 38.2	8.6	19 11.92	18 42.7	46 31.50	-24.51	-0 4.16	+10.68	-1.74	-11.20	15 19 12.97	52 35 48.7
15 20 33.5	8.0	21 7.50	20 42.0	15 57.75	-21.57	-0 4.15	+10.10	-1.74	-11.00	15 21 8.61	52 6 25.6
15 22 17.9	7.5	22 51.52	22 32.6	53 12.40	-15.91	-0 4.16	+11.11	-1.76	-11.05	15 22 52.50	52 29 17.9
15 25 14.4	8.8	25 49.86	25 31.0	40 33.15	-16.55	-0 4.12	+ 8.57	-1.73	-10.65	15 25 51.19	50 41 55.3
15 27 39.9	8.2	28 12.48	28 54.7	38 34.55	+34.49	-0 4.18	+12.18	-1.83	-11.05	15 28 13.01	53 44 48.8
15 29 38.3	7.8	30 10.36	29 54.8	52 35.95	-12.83	-0 4.17	+12.10	-1.84	-10.90	15 30 10.90	53 30 0.7
15 31 12.9	8.3	31 45.58	31 25.0	31 42.50	-16.80	-0 4.19	+12.11	-1.86	-10.90	15 31 45.98	53 50 50.6
15 34 28.1	9.0	35 1.70	34 40.9	24 5.70	-17.71	-0 4.15	+10.76	-1.82	-10.50	15 35 2.51	51 58 26.4
15 34 47.7	8.0	35 20.40	35 2.2	24 5.70	-15.50	-0 4.15	+10.79	-1.83	-10.50	15 35 21.19	51 58 28.8
15 36 31.9	9.5	37 5.24	38 5.5	18 18.75	+51.24	-0 4.14	+ 9.85	-1.84	-10.45	15 37 5.98	52 5 22.1
15 39 50.3	9.4	40 22.64	39 42.9	58 8.25	-32.72	-0 4.18	+11.80	-1.90	-10.50	15 40 22.94	53 24 11.4
15 41 23.8	7.0	41 56.74	41 30.4	18 31.50	-21.84	-0 4.17	+11.76	-1.90	-10.40	15 41 57.09	53 3 59.6
15 42 58.5	8.0	43 32.10	43 8.8	0 43.70	-19.66	-0 4.16	+10.35	-1.89	-10.25	15 43 32.60	52 21 48.8
15 43 55.1	8.2	44 27.88	44 11.8	2 13.30	-13.29	-0 4.18	+11.81	-1.92	-10.35	15 44 28.10	53 20 27.2
15 44 57.9	8.8	45 28.82	45 11.5	19 1.60	-14.04	-0 4.19	+13.01	-1.95	-10.40	15 45 28.83	54 3 39.6
15 47 22.6	9.2	47 52.76	47 25.0	5 37.05	-16.64	-0 4.17	+11.28	-1.94	-10.20	15 47 52.93	53 17 0.7
15 47 22.6	8.2	47 53.36	47 25.0	5 37.05	-23.47	-0 4.17	+11.28	-1.94	-10.20	15 47 53.53	53 16 53.9
15 49 7.4	10.0	49 38.58	49 17.4	41 25.85	-17.35	-0 4.18	+11.91	-1.96	-10.20	15 49 38.60	53 41 12.3
15 50 20.3	9.0	50 52.98	51 36.4	4 59.10	+38.32	-0 4.12	+ 8.94	-1.88	- 9.70	15 50 53.82	50 18 32.7
15 54 44.5	9.0	55 17.34	54 48.6	11 20.25	-24.87	-0 4.13	+ 9.13	-1.92	- 9.60	15 55 17.89	51 11 9.9
15 55 56.3	7.8	56 31.40	56 6.0	13 5.70	-22.02	-0 4.13	+ 9.61	-1.93	- 9.55	15 56 31.93	51 9 28.2
15 56 36.6	8.5	57 9.08	57 1.8	12 46.75	- 6.33	-0 4.13	+ 9.71	-1.93	- 9.55	15 57 9.60	51 10 3.2*
15 58 25.0	6.0	58 54.38	58 34.4	6 53.70	-16.53	-0 4.17	+11.66	-2.00	- 9.75	15 58 54.31	53 15 48.3
15 59 38.2	8.0	0 7.66	59 52.3	49 11.45	-12.56	-0 4.18	+12.49	-2.02	- 9.70	16 0 7.47	53 33 35.7

R. A. 1855.0 According to B. D.			Obs. Magn.	Mean of R. A. Wires.		Mean of Dec. Wires.		Mean of Circle Readings.		Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.					
							R. A.	Dec.	R. A.		Dec.										
h	m	s		m	s	m	s	°	"		m	s	"	s	"	h	m	s	°	'	"
16	0	49.8	7.8	1	22.38	1	12.8	18	50.00	- 7.97	-0	4.16	+11.93	-2.01	- 9.60	16	1	22.31	53	4	1.7
16	2	41.9	8.5	3	11.98	2	49.8	44	51.00	-18.20	-0	4.17	+12.71	-2.04	- 9.60	16	3	11.72	53	37	51.8
16	4	17.0	9.1	4	47.64	4	25.3	43	6.00	-18.70	-0	4.14	+11.30	-2.02	- 9.40	16	4	47.62	52	39	34.6
16	5	43.7	8.5	6	13.84	5	59.6	8	55.90	-11.75	-0	4.16	+12.18	-2.04	- 9.40	16	6	13.63	53	13	54.0
16	6	55.5	8.6	7	26.04	7	4.0	0	44.25	-18.23	-0	4.17	+11.46	-2.05	- 9.35	16	7	25.77	53	21	58.8
16	7	44.1	8.5	8	15.10	8	18.9	5	56.35	+ 3.36	-0	4.11	+ 8.38	-1.97	- 9.00	16	8	15.62	50	17	5.9
16	8	49.9	8.8	9	25.84	9	8.3	39	47.45	-15.32	-0	4.11	+ 9.64	-1.98	- 8.95	16	9	26.24	50	42	57.7
16	30	31.9	8.3	31	3.36	30	30.1	10	38.30	-27.58	-0	4.16	+11.09	-2.17	- 8.25	16	31	2.69	53	12	3.6
16	31	43.7	9.3	32	18.54	32	0.5	51	26.45	-15.48	-0	4.13	+ 9.79	-2.12	- 8.05	16	32	18.34	51	31	26.8
16	32	46.9	....	33	17.52	33	1.6	12	25.50	-15.74	-0	4.16	+11.79	-2.18	- 8.15	16	33	16.84	53	10	32.4
16	32	49.2	....	33	17.92	32	58.9	12	25.50	-13.17	-0	4.16	+11.77	-2.18	- 8.15	16	33	17.24	53	10	29.8
16	42	27.9	9.1	42	59.48	42	27.8	33	19.70	-25.87	-0	4.18	+12.43	-2.24	- 7.75	16	42	58.44	53	49	29.6
16	46	5.9	8.5	46	34.86	46	7.0	43	47.80	-22.87	-0	4.17	+12.46	-2.26	- 7.55	16	46	33.82	53	39	6.0
16	50	13.8	9.5	50	42.48	50	23.9	4	23.70	-15.36	-0	4.16	+12.37	-2.26	- 7.30	16	50	41.50	53	18	39.2
16	51	13.8	8.5	51	44.22	51	37.3	12	55.40	- 5.72	-0	4.16	+11.96	-2.26	- 7.25	16	51	43.26	53	10	17.1
ZONE 91, JULY 1, 1871.																					
15	20	38.5	8.0	21	11.24	20	50.8	43	13.30	-16.31	-0	4.45	+13.52	-1.79	-11.60	15	21	11.49	54	39	18.5
15	24	28.0	9.2	25	0.50	24	32.6	40	9.65	-22.28	-0	4.45	+12.73	-1.81	-11.45	15	25	0.63	54	42	16.5
15	25	35.4	9.1	26	8.56	25	48.3	48	21.10	-16.27	-0	4.45	+13.46	-1.82	-11.40	15	26	8.69	54	34	12.2
15	26	35.6	9.0	27	8.90	26	49.2	58	53.15	-15.86	-0	4.45	+13.41	-1.82	-11.35	15	27	9.05	54	23	40.8
15	28	1.7	9.0	28	32.02	28	9.1	28	52.35	-18.21	-0	4.46	+13.90	-1.84	-11.35	15	28	32.00	54	53	40.1
15	30	55.2	8.7	31	28.80	31	3.5	15	34.95	-22.42	-0	4.35	+ 8.02	-1.74	-10.55	15	31	29.90	50	6	49.1
15	32	9.8	9.5	32	46.42	32	21.2	6	39.45	-22.27	-0	4.35	+ 8.41	-1.75	-10.55	15	32	47.46	50	15	45.5
15	34	21.0	7.0	34	54.38	34	27.9	32	32.45	-23.13	-0	4.37	+ 9.21	-1.77	-10.55	15	34	55.24	50	49	53.0
15	37	30.5	9.0	38	4.46	37	40.5	31	59.35	-21.40	-0	4.35	+ 8.08	-1.77	-10.30	15	38	5.47	49	50	27.9
15	39	23.2	9.4	39	56.82	39	29.4	30	19.15	-23.90	-0	4.37	+ 8.69	-1.81	-10.40	15	39	57.54	50	52	6.6
15	40	14.8	8.8	40	45.88	40	20.8	4	46.70	-19.99	-0	4.42	+12.41	-1.88	-10.65	15	40	45.98	53	17	46.7
15	42	0.3	9.0	42	34.62	42	10.5	12	56.45	-21.35	-0	4.35	+ 8.63	-1.81	-10.20	15	42	35.46	50	9	32.8
15	43	20.7	9.1	43	54.08	43	32.0	6	29.10	-19.52	-0	4.35	+ 8.43	-1.82	-10.15	15	43	54.87	50	16	2.2
15	46	59.2	9.0	47	32.02	47	10.1	44	54.95	-18.37	-0	4.41	+11.75	-1.90	-10.30	15	47	32.14	52	37	41.7
15	48	9.1	9.1	48	40.68	48	11.6	26	17.95	-24.24	-0	4.41	+11.15	-1.91	-10.30	15	48	40.70	52	56	12.6
15	48	9.1	9.1	48	41.76	48	15.5	26	17.95	-21.91	-0	4.41	+11.19	-1.91	-10.30	15	48	41.78	52	56	14.9
15	49	22.3	8.5	49	54.28	49	34.8	7	53.30	-15.75	-0	4.44	+13.02	-1.97	-10.45	15	49	53.89	54	14	47.7
15	51	46.5	8.8	52	17.16	51	53.2	58	58.70	-19.32	-0	4.45	+13.38	-1.98	-10.35	15	52	16.68	54	23	40.0
15	54	44.4	8.6	55	14.52	54	47.8	31	57.95	-21.25	-0	4.46	+13.34	-2.02	-10.30	15	55	13.83	54	50	39.7
15	56	51.3	7.2	57	21.06	56	57.5	3	38.60	-19.03	-0	4.44	+13.21	-2.01	-10.15	15	57	20.50	54	19	1.9
15	57	15.6	9.1	57	48.40	58	0.6	44	24.40	+10.70	-0	4.36	+ 9.60	-1.91	- 9.50	15	57	48.81	50	38	43.2
16	0	10.7	9.1	0	46.84	....	....	....	....	....	-0	4.37	....	-1.93	....	16	0	47.13	....	....	....
16	1	58.0	9.3	2	30.16	2	1.8	1	15.35	-23.98	-0	4.40	+10.49	-1.98	- 9.70	16	2	30.03	52	21	19.5
16	2	45.3	9.5	3	18.34	3	4.9	56	49.85	-11.29	-0	4.40	+10.98	-1.98	- 9.65	16	3	18.18	52	25	58.5
16	6	56.6	8.7	7	24.44	6	58.9	23	47.00	-20.23	-0	4.46	+13.96	-2.09	- 9.75	16	7	23.44	54	58	56.5
16	7	34.8	8.8	8	2.62	7	49.3	44	8.80	-10.64	-0	4.45	+13.77	-2.09	- 9.70	16	8	1.71	54	38	44.4
16	10	12.5	9.0	10	44.08	10	21.2	59	12.15	-20.18	-0	4.36	+ 9.19	-1.97	- 9.10	16	10	44.29	50	23	28.3
16	11	6.0	9.6	11	37.56	11	16.1	36	23.60	-18.39	-0	4.38	+10.01	-2.01	- 9.25	16	11	37.41	51	46	19.6
16	12	34.1	8.9	13	6.20	12	44.6	28	2.65	-18.42	-0	4.39	+10.51	-2.02	- 9.20	16	13	5.99	51	54	41.5
16	14	9.4	9.6	14	40.50	14	22.8	33	50.50	-15.46	-0	4.37	+ 9.55	-2.00	- 9.00	16	14	40.54	50	48	56.4
16	15	21.1	9.3	15	51.64	15	27.4	13	53.75	-20.99	-0	4.37	+ 9.89	-2.02	- 9.00	16	15	51.57	51	8	48.3
16	16	53.7	9.5	17	25.28	17	9.7	59	1.35	-13.46	-0	4.38	+10.26	-2.03	- 8.95	16	17	25.12	51	23	49.2
16	17	35.2	8.8	18	6.46	18	22.1	11	43.35	+13.52	-0	4.37	+ 9.49	-2.03	- 8.90	16	18	6.34	51	11	33.6
16	19	53.2	9.0	20	26.56	20	1.2	41	54.20	-21.77	-0	4.37	+ 9.98	-2.05	- 8.85	16	20	26.29	51	40	48.7
16	20	43.3	9.0	21	15.18	20	58.5	17	3.05	-14.50	-0	4.37	+ 9.47	-2.04	- 8.75	16	21	15.04	51	5	47.1
16	21	49.6	7.5	22	19.06	21	57.0	57	26.00	-19.05	-0	4.38	+ 9.82	-2.05	- 8.75	16	22	18.81	51	25	20.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
16 22 34.6	9.2	23 6.42	22 50.5	24 15.70	-13.84	-0 4.37	+ 9.90	-2.05	- 8.65	16 23 6.27	50 58 36.2
16 24 22.1	7.0	24 52.28	24 31.0	30 44.00	-18.18	-0 4.39	+ 9.96	-2.08	- 8.70	16 24 51.87	51 52 4.1
16 25 21.0	8.0	25 51.70	25 31.3	20 24.30	-17.73	-0 4.37	+ 8.98	-2.06	- 8.55	16 25 51.49	51 2 23.7
16 27 2.3	9.5	27 33.12	27 5.9	38 53.20	-23.29	-0 4.38	+10.49	-2.09	- 8.50	16 27 32.70	51 43 51.4
16 30 7.3	9.0	30 41.18	30 11.5	36 34.15	-25.41	-0 4.38	+ 9.95	-2.11	- 8.40	16 30 40.70	51 46 8.9
16 31 20.0	8.8	31 53.28	31 31.8	14 18.00	-18.65	-0 4.37	+10.01	-2.09	- 8.30	16 31 52.95	51 8 32.3
16 33 39.9	8.4	34 9.74	33 48.7	47 32.50	-18.04	-0 4.38	+10.07	-2.12	- 8.20	16 34 9.25	51 35 19.4
16 35 19.0	7.0	35 51.20	35 30.7	18 25.85	-17.81	-0 4.37	+ 9.75	-2.11	- 8.05	16 35 50.83	51 4 26.6
16 36 30.9	8.5	36 59.42	36 39.8	45 0.40	-15.69	-0 4.45	+12.74	-2.23	- 8.35	16 36 57.98	54 37 57.2
16 38 4.3	8.5	38 32.14	38 12.6	42 45.85	-15.59	-0 4.45	+13.42	-2.24	- 8.30	16 38 30.67	54 40 13.2
16 39 15.6	9.0	39 45.78	39 26.7	40 52.15	-15.25	-0 4.45	+13.02	-2.25	- 8.25	16 39 44.28	54 42 7.2
16 41 46.1	9.0	42 14.18	41 45.1	57 4.15	-23.40	-0 4.45	+12.87	-2.25	- 8.05	16 42 12.71	54 25 47.9
16 43 25.9	8.3	43 53.90	43 31.2	45 58.45	-18.17	-0 4.45	+12.90	-2.27	- 8.00	16 43 52.35	54 36 59.5
16 44 46.9	8.9	45 14.72	44 54.4	58 53.25	-16.34	-0 4.45	+13.41	-2.27	- 7.90	16 45 13.21	54 24 7.6
16 45 51.4	8.0	46 20.30	46 4.0	8 25.50	-13.17	-0 4.45	+13.16	-2.26	- 7.85	16 46 18.83	54 14 38.7
16 48 4.2	8.9	48 34.18	48 18.6	23 26.95	-12.68	-0 4.44	+12.90	-2.26	- 7.75	16 48 32.76	53 59 38.3
16 48 45.6	7.5	49 12.62	48 59.6	50 51.75	-10.43	-0 4.45	+12.90	-2.29	- 7.65	16 49 11.01	54 32 16.1
16 49 27.7	7.8	49 54.92	50 16.5	36 27.05	+17.22	-0 4.45	+13.24	-2.30	- 7.75	16 49 53.23	54 47 8.9
16 50 43.1	8.9	51 14.50	50 55.1	11 27.00	-16.07	-0 4.42	+11.59	-2.25	- 7.55	16 51 13.29	53 11 34.8
16 52 7.6	8.8	52 35.50	52 15.8	45 26.35	-15.77	-0 4.45	+12.81	-2.31	- 7.60	16 52 33.82	54 37 37.2
16 54 16.5	9.0	54 46.60	54 19.1	11 51.70	-22.79	-0 4.42	+11.59	-2.26	- 7.35	16 54 45.35	53 11 4.6*
16 55 52.0	8.8	56 20.14	55 58.7	28 11.00	-17.40	-0 4.46	+13.76	-2.33	- 7.40	16 56 18.31	54 54 53.4
16 56 47.3	7.8	57 15.64	57 1.4	9 31.25	-11.75	-0 4.44	+12.38	-2.27	- 7.25	16 57 14.33	53 13 37.8
16 57 59.2	9.4	58 29.64	58 6.6	47 57.20	-18.88	-0 4.43	+12.29	-2.29	- 7.20	16 58 28.22	53 35 5.1
16 58 48.2	9.5	59 17.42	59 7.8	2 5.55	- 7.92	-0 4.43	+11.94	-2.29	- 7.15	16 59 16.05	53 21 7.7
ZONE 92, JULY 3, 1871.											
15 20 38.5	8.0	21 11.44	20 44.1	43 6.40	-21.83	-0 4.77	+13.00	-1.74	-11.95	15 21 11.42	54 39 18.6
15 24 28.0	9.3	25 0.68	24 40.6	40 13.30	-16.05	-0 4.77	+12.45	-1.77	-11.75	15 25 0.53	54 42 18.1
15 25 35.4	9.2	26 8.74	25 49.0	48 19.45	-15.79	-0 4.77	+13.09	-1.78	-11.75	15 26 8.59	54 34 13.2
15 26 35.6	8.7	27 9.06	26 47.6	58 52.20	-17.31	-0 4.77	+13.02	-1.78	-11.70	15 27 8.93	54 23 39.2
15 28 1.7	8.0	28 32.28	28 10.3	28 51.00	-17.49	-0 4.78	+13.52	-1.80	-11.70	15 28 31.98	54 53 41.1
15 28 33.3	9.5	29 9.24	29 28.3	38 49.45	+15.99	-0 4.72	+11.32	-1.75	-11.40	15 29 9.50	52 44 14.4
15 30 55.2	8.0	31 29.02	31 8.3	15 37.85	-18.35	-0 4.67	+ 7.79	-1.70	-10.95	15 31 29.84	50 6 49.2
15 32 9.8	9.5	32 46.44	32 40.6	6 55.25	- 5.13	-0 4.67	+ 8.41	-1.71	-10.90	15 32 47.20	50 15 46.1
15 34 21.0	6.5	34 54.60	34 34.0	32 35.55	-17.98	-0 4.68	+ 9.02	-1.74	-10.95	15 34 55.18	50 49 54.1
15 37 30.5	8.7	38 4.68	37 41.3	31 58.55	-20.86	-0 4.67	+ 7.86	-1.74	-10.70	15 38 5.40	49 50 28.2
15 39 23.2	9.2	39 57.06	39 32.3	30 18.95	-21.63	-0 4.69	+ 8.46	-1.77	-10.75	15 39 57.50	50 52 8.1
15 40 14.8	8.2	40 46.16	40 29.9	4 50.65	-13.47	-0 4.74	+12.16	-1.84	-11.05	15 40 45.98	53 17 48.2
15 42 0.3	9.0	42 34.82	42 12.2	12 54.85	-20.02	-0 4.67	+ 8.41	-1.77	-10.60	15 42 35.38	50 9 34.7
15 43 20.7	9.2	43 54.32	43 31.5	6 27.45	-20.14	-0 4.67	+ 8.17	-1.78	-10.55	15 43 54.83	50 16 2.1
15 48 9.1	....	48 40.88	49 4.2	27 0.60	+18.87	-0 4.73	+11.21	-1.87	-10.70	15 48 40.62	52 56 12.3
15 48 9.1	....	48 42.05	49 6.7	27 1.16	+21.55	-0 4.73	+11.07	-1.87	-10.70	15 48 41.79	52 56 14.3
15 51 46.5	8.5	52 17.40	51 50.8	58 55.80	-21.61	-0 4.77	+12.97	-1.94	-10.75	15 52 16.64	54 23 39.4
15 52 25.2	9.5	52 55.74	52 51.0	51 43.60	- 3.77	-0 4.77	+12.72	-1.95	-10.75	15 52 54.93	54 31 9.4
15 54 44.4	9.0	55 14.76	54 52.2	31 57.10	-17.99	-0 4.78	+13.01	-1.98	-10.70	15 55 13.79	54 50 42.7
15 56 51.3	8.0	57 21.12	56 53.7	3 32.75	-22.09	-0 4.76	+12.77	-1.97	-10.55	15 57 20.28	54 19 3.5
15 59 48.4	9.3	0 21.98	59 58.0	31 17.50	-20.94	-0 4.69	+ 8.71	-1.89	-10.05	16 0 22.00	50 51 17.2
16 0 10.7	9.3	0 47.10	1 9.8	32 49.50	+19.82	-0 4.68	+ 9.08	-1.90	-10.00	16 0 47.11	50 50 26.5
16 4 8.3	8.7	4 36.60	4 16.1	41 18.75	-16.38	-0 4.78	+12.71	-2.03	-10.30	16 4 35.47	54 41 25.6
16 5 11.2	8.0	5 44.76	5 24.9	19 4.90	-17.29	-0 4.70	+ 9.62	-1.93	- 9.85	16 5 44.60	51 3 36.2
16 6 56.6	8.9	7 24.62	7 9.4	23 54.00	-12.06	-0 4.79	+13.69	-2.06	-10.20	16 7 23.32	54 58 56.6
16 7 34.8	8.9	8 2.84	8 14.4	44 25.25	+ 9.28	-0 4.78	+13.47	-2.05	-10.20	16 8 1.64	54 38 46.7

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.		Mean of Dec. Wires.		Mean of Circle Readings.		Red. to Horiz. Wire.	Sum of Reductions.			Reduction to beginning of current year.		Mean R. A. 1875.0.			Mean Dec. 1875.0.		
		m	s	m	s	'	"		R. A.	Dec.	"	R. A.	Dec.	h	m	s	°	'	"
16 10 12.5	8.7	10	44.38	10	16.8	59	7.05	-24.33	-0	4.69	+ 8.84	-1.94	- 9.55	16	10	44.29	50	23	28.1
16 11 6.0	9.3	11	37.84	11	26.1	36	29.50	-10.01	-0	4.71	+ 9.83	-1.98	- 9.70	16	11	37.39	51	46	21.1
16 12 34.1	9.2	13	6.38	12	54.2	28	7.55	-10.40	-0	4.72	+10.33	-1.99	- 9.65	16	13	5.87	51	54	43.6
16 14 9.4	9.5	14	40.80	14	20.8	33	45.95	-17.47	-0	4.70	+ 9.28	-1.97	- 9.45	16	14	40.54	50	48	57.8
16 15 21.1	9.2	15	52.00	15	30.0	13	56.35	-19.08	-0	4.70	+ 9.60	-1.99	- 9.45	16	15	51.63	51	8	46.5
16 17 35.2	8.0	18	6.58	18	3.9	11	21.00	- 2.34	-0	4.70	+ 9.22	-2.00	- 9.35	16	18	6.16	51	11	39.0
16 18 33.2	9.8	19	5.28	19	0.8	6	47.90	- 3.89	-0	4.70	+ 9.41	-2.01	- 9.35	16	19	4.83	51	16	11.1
16 19 53.2	9.3	20	26.80	20	4.9	41	55.80	-18.77	-0	4.70	+ 9.73	-2.03	- 9.35	16	20	26.22	51	40	49.0
16 20 43.3	9.3	21	15.46	21	23.5	17	20.55	+ 6.95	-0	4.70	+ 9.32	-2.01	- 9.20	16	21	15.02	51	5	50.0
16 21 49.6	6.5	22	19.42	22	10.0	57	36.15	- 8.10	-0	4.71	+ 9.71	-2.03	- 9.20	16	22	18.86	51	25	20.1
16 22 34.6	9.4	23	6.66	23	7.7	24	25.45	+ 0.87	-0	4.70	+ 9.74	-2.02	- 9.15	16	23	6.21	50	58	40.1
16 24 22.1	7.5	24	52.46	24	32.8	30	43.95	-16.81	-0	4.72	+ 9.67	-2.05	- 9.15	16	24	51.75	51	52	4.4
16 25 21.0	7.8	25	51.86	25	36.6	20	28.10	-13.30	-0	4.70	+ 8.80	-2.03	- 9.00	16	25	51.35	51	2	23.4
16 27 2.3	9.6	27	33.58	27	15.8	38	58.15	-15.24	-0	4.71	+10.34	-2.06	- 9.00	16	27	32.86	51	43	53.5
16 28 51.1	8.5	29	22.02	28	57.6	6	27.50	-20.63	-0	4.72	+10.01	-2.09	- 9.00	16	29	21.12	52	16	19.0
16 30 7.3	9.0	30	41.46	30	18.1	36	35.45	-20.02	-0	4.71	+ 9.75	-2.08	- 8.90	16	30	40.68	51	46	11.9
16 31 20.0	9.1	31	53.60	31	32.3	14	17.40	-18.47	-0	4.70	+ 9.75	-2.07	- 8.75	16	31	52.96	51	8	32.0
16 33 39.9	8.2	34	9.94	33	59.3	47	41.40	- 9.10	-0	4.71	+ 9.93	-2.09	- 8.70	16	34	9.15	51	35	18.4
16 35 19.0	6.5	35	51.46	35	29.3	18	24.60	-19.28	-0	4.70	+ 9.46	-2.09	- 8.60	16	35	50.78	51	4	25.2
16 36 30.9	8.0	36	59.62	36	43.8	45	0.60	-12.65	-0	4.78	+12.38	-2.20	- 8.85	16	36	57.88	54	37	58.8
16 38 4.3	8.8	38	32.28	38	13.0	42	45.05	-15.43	-0	4.78	+13.06	-2.22	- 8.80	16	38	30.50	54	40	12.9
16 39 15.6	8.8	39	46.06	39	25.0	40	51.15	-16.85	-0	4.78	+12.63	-2.22	- 8.70	16	39	44.26	54	42	5.4
16 41 46.1	8.7	42	14.38	41	51.6	57	6.50	-18.34	-0	4.78	+12.58	-2.22	- 8.60	16	42	12.61	54	25	49.4
16 43 25.9	8.4	43	54.28	43	34.8	45	59.75	-15.61	-0	4.78	+12.58	-2.24	- 8.50	16	43	52.43	54	36	59.6
16 44 46.9	9.0	45	15.00	44	50.5	58	48.40	-19.72	-0	4.78	+12.99	-2.24	- 8.45	16	45	13.19	54	24	7.7
16 45 51.4	8.0	46	20.68	46	1.8	8	22.45	-15.27	-0	4.78	+12.78	-2.24	- 8.35	16	46	18.90	54	14	38.4
16 48 4.2	9.3	48	34.48	48	9.0	23	17.10	-20.72	-0	4.78	+12.41	-2.24	- 8.25	16	48	32.74	53	59	38.7
16 48 45.6	7.2	49	12.84	49	3.9	50	54.00	- 7.14	-0	4.79	+12.56	-2.26	- 8.25	16	49	10.92	54	32	15.8
16 49 27.7	8.0	49	54.99	50	18.0	36	25.30	+18.33	-0	4.79	+12.82	-2.28	- 8.25	16	49	52.98	54	47	10.4
16 50 43.1	9.1	51	14.96	51	8.8	11	37.95	- 5.14	-0	4.76	+11.36	-2.22	- 8.05	16	51	13.44	53	11	33.7
16 52 7.6	8.9	52	35.64	52	18.0	45	26.75	-14.09	-0	4.79	+12.45	-2.28	- 8.10	16	52	33.65	54	37	37.2
16 54 16.5	9.0	54	46.92	54	21.8	11	49.55	-20.80	-0	4.76	+11.26	-2.24	- 7.90	16	54	45.35	53	11	7.5
16 55 52.0	8.5	56	20.40	55	57.7	28	7.40	-18.04	-0	4.80	+13.33	-2.31	- 7.95	16	56	18.25	54	54	54.9
16 56 47.3	7.0	57	15.88	57	0.1	9	28.15	-13.08	-0	4.78	+12.00	-2.25	- 7.75	16	57	14.25	53	13	38.3
16 57 59.2	9.2	58	29.74	58	16.7	48	2.70	-11.16	-0	4.77	+12.05	-2.26	- 7.75	16	58	28.01	53	35	6.2
16 58 48.2	9.0	59	17.70	59	6.4	2	1.70	- 9.33	-0	4.77	+11.59	-2.26	- 7.70	16	59	16.02	53	21	8.9
ZONE 93, JULY 5, 1871.																			
15 32 24.9	9.3	32	57.66	32	32.9	5	25.15	-20.01	-0	5.72	+12.03	-1.77	-11.85	15	32	56.50	54	17	3.7
15 34 27.8	9.5	35	1.66	34	32.8	23	43.70	-24.07	-0	5.70	+11.46	-1.75	-11.60	15	35	0.78	52	58	41.3
15 39 4.3	9.0	39	38.22	39	11.0	33	29.50	-23.24	-0	5.67	+10.18	-1.76	-11.30	15	39	37.51	51	48	56.7
15 40 34.7	8.0	41	6.46	40	46.2	0	9.05	-16.74	-0	5.71	+11.10	-1.80	-11.45	15	41	5.33	53	22	24.9
15 42 6.1	9.0	42	39.90	42	17.1	7	36.85	-18.42	-0	5.72	+12.52	-1.84	-11.50	15	42	38.50	54	14	57.2
15 43 10.8	9.1	43	44.96	43	21.6	22	4.35	-19.01	-0	5.72	+12.16	-1.84	-11.45	15	43	43.59	54	0	29.1
15 49 22.3	8.5	49	55.52	49	28.2	7	44.00	-22.04	-0	5.73	+12.52	-1.89	-11.25	15	49	53.92	54	14	48.7
15 51 46.5	8.5	52	18.44	51	54.2	58	56.60	-19.48	-0	5.74	+12.99	-1.91	-11.15	15	52	16.74	54	23	40.1
15 54 35.3	9.0	55	14.10	54	51.3	45	28.90	-19.99	-0	5.66	+ 8.28	-1.82	-10.60	15	55	13.34	50	37	3.9
15 55 56.7	8.6	56	29.22	56	11.5	11	11.95	-15.67	-0	5.64	+ 8.08	-1.82	-10.50	15	56	28.54	50	11	25.5
15 56 53.6	8.5	57	23.12	57	2.1	30	21.55	-16.70	-0	5.75	+12.70	-1.95	-11.05	15	57	21.17	54	52	19.2
15 57 15.6	9.0	57	49.78	57	1.4	43	29.15	-42.43	-0	5.65	+ 8.71	-1.84	-10.45	15	57	48.95	50	38	42.8
15 59 48.7	8.8	0	21.32	0	2.6	47	37.00	-15.70	-0	5.69	+10.88	-1.91	-10.65	16	0	19.95	52	35	4.2
16 1 5.3	8.7	1	35.66	1	22.0	37	3.90	-10.93	-0	5.74	+13.02	-1.98	-10.85	16	1	33.66	54	45	44.3
16 1 37.9	9.2	2	8.38	1	47.2	37	3.90	-16.91	-0	5.74	+12.97	-1.98	-10.85	16	2	6.36	54	45	38.5

R. A. 1855.o. According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.			Reduction to beginning of current year.		Mean R. A. 1875.o.	Mean Dec. 1875.o.
						R. A.	Dec.		R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"		s	"	h m s	° ' "
16 2 21.0	9.2	2 52.76	2 36.4	56 48.75	-13.82	-0 5.69	+10.56	-1.92	-10.55		16 2 51.38	52 25 54.9
16 4 49.3	8.9	5 18.50	4 54.7	31 14.50	-18.94	-0 5.74	+12.83	-2.00	-10.75		16 5 16.38	54 51 26.8
16 7 27.0	9.2	7 59.88	7 38.8	9 18.30	-18.66	-0 5.64	+ 8.82	-1.88	-10.20		16 7 58.97	50 13 20.7
16 10 48.2	9.4	11 24.26	11 1.9	29 52.60	-19.54	-0 5.66	+ 9.63	-1.92	-10.05		16 11 23.12	50 52 47.5
16 12 17.9	9.5	12 52.20	12 33.4	7 27.00	-16.62	-0 5.64	+ 8.43	-1.92	- 9.90		16 12 51.19	50 15 15.4
16 13 20.0	8.9	13 55.34	13 35.2	3 46.00	-17.74	-0 5.66	+ 8.80	-1.92	- 9.85		16 13 54.28	50 18 56.0
16 14 49.9	9.0	15 21.84	14 58.8	44 40.95	-19.73	-0 5.68	+10.32	-1.96	- 9.95		16 15 20.43	51 38 1.0
16 16 14.9	9.0	16 47.08	16 25.4	18 28.00	-17.52	-0 5.74	+12.61	-2.04	-10.20		16 16 44.94	54 4 18.6
16 17 24.5	7.8	17 56.96	17 39.3	35 43.55	-15.13	-0 5.68	+ 9.60	-1.98	- 9.90		16 17 55.46	51 47 3.1
16 19 2.4	8.7	19 36.06	19 14.1	19 46.00	-19.12	-0 5.67	+ 9.75	-1.97	- 9.75		16 19 34.72	51 2 57.5
16 21 36.9	8.5	22 7.80	21 44.5	58 12.70	-19.20	-0 5.73	+11.84	-2.06	- 9.90		16 22 5.74	53 24 33.5
16 24 21.8	9.2	24 50.74	24 26.2	51 29.45	-19.66	-0 5.75	+12.51	-2.11	- 9.90		16 24 48.30	54 31 17.8
16 24 58.1	9.0	25 31.18	25 18.5	26 56.10	-11.07	-0 5.67	+ 9.04	-2.00	- 9.50		16 25 29.76	50 55 56.9
16 27 33.6	8.0	28 6.30	27 44.6	58 25.70	-18.71	-0 5.68	+ 9.79	-2.03	- 9.45		16 28 4.71	51 24 21.3
16 29 12.4	8.5	29 42.44	29 29.8	46 59.60	-10.09	-0 5.75	+12.83	-2.14	- 9.70		16 29 39.89	54 35 59.3
16 30 23.8	8.0	30 58.44	30 35.9	9 4.80	-19.48	-0 5.67	+ 9.78	-2.04	- 9.30		16 30 56.86	51 13 42.5
16 30 59.0	9.2	31 31.42	31 41.2	42 5.05	+ 8.58	-0 5.66	+ 8.85	-2.02	- 9.20		16 31 29.98	50 41 9.7
16 31 43.9	9.0	32 13.92	32 3.1	37 29.70	- 8.62	-0 5.75	+13.10	-2.16	- 9.60		16 32 11.28	54 45 31.9
16 32 46.9	5.0	33 18.84	32 54.6	12 15.00	-20.05	-0 5.72	+11.37	-2.10	- 9.45		16 33 16.67	53 10 33.9
16 32 49.2	7.0	33 19.38	32 53.0	12 15.00	-21.87	-0 5.72	+11.34	-2.10	- 9.45		16 33 17.21	53 10 32.1
16 33 50.2	9.0	34 17.44	33 55.6	31 30.35	-17.35	-0 5.76	+12.90	-2.17	- 9.50		16 34 14.73	54 51 23.1
16 35 4.3	9.1	35 37.40	35 10.5	10 50.40	-23.81	-0 5.65	+ 7.88	-2.03	- 9.00		16 35 36.02	50 11 52.5
16 36 18.4	9.3	36 50.98	36 30.2	25 19.75	-18.11	-0 5.67	+ 8.61	-2.06	- 9.05		16 36 49.37	50 57 29.9
16 37 14.1	9.4	37 46.90	37 25.7	50 19.05	-18.63	-0 5.67	+ 8.18	-2.05	- 8.95		16 37 45.38	50 32 30.1
16 38 21.2	7.8	38 52.34	38 29.2	4 20.10	-19.08	-0 5.73	+11.98	-2.14	- 9.15		16 38 50.03	53 18 32.5
16 39 58.9	8.5	40 32.88	40 10.0	28 59.95	-19.97	-0 5.68	+ 9.40	-2.08	- 8.85		16 40 31.22	50 53 50.0
16 42 24.9	9.0	42 57.76	42 35.3	49 32.15	-19.76	-0 5.67	+ 9.53	-2.08	- 8.70		16 42 56.16	50 33 19.1
16 44 25.5	8.8	44 58.32	44 35.5	50 31.85	-20.03	-0 5.67	+ 8.21	-2.09	- 8.65		16 44 56.70	50 32 18.6
16 46 2.9	6.8	46 32.92	46 10.8	15 0.00	-18.33	-0 5.73	+10.81	-2.17	- 8.80		16 46 30.54	53 7 55.1
16 46 51.5	9.0	47 22.08	46 58.2	0 45.05	-20.18	-0 5.70	+10.15	-2.20	- 8.70		16 47 19.88	52 22 7.9
16 48 10.7	9.3	48 39.16	48 21.3	11 57.10	-14.48	-0 5.75	+12.39	-2.23	- 8.80		16 48 36.42	54 11 4.1
16 49 4.3	8.8	49 36.78	49 15.3	19 36.55	-19.08	-0 5.66	+ 8.71	-2.09	- 8.40		16 49 35.23	50 3 17.1
16 49 58.7	8.9	50 29.02	50 4.9	6 27.65	-19.45	-0 5.75	+12.30	-2.23	- 8.70		16 50 26.22	54 16 29.2
16 51 28.0	7.5	51 58.80	51 40.3	13 11.25	-15.69	-0 5.70	+10.62	-2.17	- 8.50		16 51 56.63	52 9 48.4
16 52 24.7	7.0	52 56.14	52 35.5	8 49.65	-18.22	-0 5.66	+ 8.62	-2.11	- 8.25		16 52 54.50	50 14 6.1
16 53 34.7	9.0	54 7.54	53 48.0	11 52.50	-16.90	-0 5.68	+ 9.25	-2.14	- 8.30		16 54 5.64	51 11 5.5
16 54 11.5	9.4	54 44.51	54 34.3	17 49.95	- 9.05	-0 5.66	+ 8.42	-2.12	- 8.15		16 54 42.88	50 5 15.4
16 54 54.6	9.3	55 27.24	55 23.5	0 50.05	- 3.26	-0 5.67	+ 8.24	-2.13	- 8.15		16 55 25.52	50 22 21.2
16 57 55.0	7.8	58 24.46	58 7.9	35 59.30	-13.91	-0 5.71	+10.73	-2.21	- 8.25		16 58 22.04	52 47 4.6
16 58 37.5	8.0	59 9.33	59 32.4	54 26.20	+20.40	-0 5.67	+ 9.10	-2.15	- 8.00		16 59 7.54	50 29 10.9
17 0 14.2	8.9	0 45.44	0 24.2	57 49.20	-18.28	-0 5.69	+ 9.67	-2.18	- 8.00		17 0 43.38	51 25 10.3
17 1 5.0	7.5	1 38.14	1 23.3	3 15.70	-12.50	-0 5.71	+10.83	-2.21	- 8.05		17 1 35.81	52 19 51.0
17 2 31.9	8.8	3 4.80	2 45.7	55 8.70	-16.81	-0 5.68	+ 8.07	-2.16	- 7.85		17 3 2.97	50 27 51.6
17 3 29.0	9.2	4 0.18	3 41.4	19 44.65	-16.34	-0 5.68	+ 9.76	-2.18	- 7.85		17 3 58.19	51 3 18.2
17 5 9.7	8.7	5 40.94	5 20.1	32 4.95	-18.16	-0 5.69	+ 8.91	-2.19	- 7.75		17 5 38.97	50 50 55.9
17 6 40.7	9.8	7 12.90	6 50.8	19 47.05	-19.20	-0 5.67	+ 8.80	-2.17	- 7.60		17 7 11.13	50 3 13.3
17 7 25.4	9.0	7 56.24	7 44.2	54 58.75	-10.33	-0 5.70	+10.36	-2.21	- 7.70		17 7 54.07	51 28 12.2
17 8 3.1	9.0	8 34.62	8 26.4	51 38.50	- 7.05	-0 5.70	+ 9.57	-2.22	- 7.65		17 8 32.43	51 31 35.2
17 8 44.5	9.0	9 14.06	9 4.4	12 7.13	- 8.22	-0 5.71	+10.41	-2.24	- 7.70		17 9 11.67	52 11 6.4
17 10 14.9	9.0	10 45.42	10 22.1	19 34.10	-19.81	-0 5.71	+10.74	-2.24	- 7.65		17 10 43.06	52 3 28.7
17 11 3.3	8.9	11 35.30	11 14.5	12 23.20	-18.42	-0 5.67	+ 8.34	-2.19	- 7.40		17 11 33.46	50 10 39.2
17 12 18.9	9.2	12 48.04	12 29.6	36 5.95	-15.03	-0 5.75	+11.78	-2.31	- 7.65		17 12 45.12	53 47 3.4
17 13 5.3	8.6	13 37.34	13 23.0	38 53.40	-12.51	-0 5.68	+ 9.32	-2.21	- 7.35		17 13 35.33	50 44 16.6
17 13 44.0	8.7	14 13.44	14 34.8	52 16.15	+17.59	-0 5.75	+11.74	-2.31	- 7.55		17 14 10.58	53 31 26.4
17 15 29.6	8.8	15 58.56	15 43.2	45 19.35	-12.63	-0 5.75	+11.44	-2.32	- 7.45		17 15 55.65	53 37 53.2
17 16 31.9	9.4	17 4.34	16 48.6	38 47.55	-13.74	-0 5.68	+ 9.27	-2.23	- 7.15		17 17 2.29	50 44 24.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	" m s		s	"	h m s	° ' "
17 17 41.5	8.7	18 13.98	17 55.1	24 54.00	-16.46	-0 5.69	+ 9.73	-2.24	- 7.15	17 18 11.85	50 58 14.2
17 19 3.5	9.1	19 35.28	19 12.5	52 39.45	-20.05	-0 5.68	+ 8.66	-2.22	- 7.05	17 19 33.28	50 30 24.7
17 19 48.6	8.6	20 19.32	20 2.6	43 2.55	-14.32	-0 5.70	+10.03	-2.27	- 7.10	17 20 16.98	51 40 8.9
17 21 6.4	6.8	21 38.04	21 13.0	34 59.85	-21.86	-0 5.68	+ 8.55	-2.24	- 7.00	17 21 35.94	50 48 3.2
17 22 5.2	8.7	22 35.56	22 10.5	46 55.15	-21.56	-0 5.70	+ 9.60	-2.27	- 7.00	17 22 33.22	51 36 9.5
17 24 17.9	8.5	24 49.60	24 26.2	42 23.80	-20.50	-0 5.68	+ 8.82	-2.25	- 6.80	17 24 47.51	50 40 42.1
17 25 11.5	7.0	25 41.28	25 22.3	55 26.55	-16.37	-0 5.70	+ 9.15	-2.28	- 6.85	17 25 38.95	51 27 44.1
ZONE 94, JULY 7, 1871.											
16 5 15.1	9.0	5 50.68	5 33.3	16 18.45	-15.43	-0 7.01	+ 7.92	-1.84	-10.50	16 5 48.50	50 6 21.7
16 7 19.3	9.4	7 53.98	7 33.4	13 48.65	-17.78	-0 7.03	+ 9.57	-1.88	-10.64	16 7 51.50	51 8 51.2
16 16 44.4	9.0	17 19.48	16 55.4	17 15.30	-21.38	-0 7.02	+ 8.11	-1.90	-10.10	16 17 17.08	50 5 23.0
16 19 2.4	9.2	19 45.72	19 17.8	16 4.00	-24.21	-0 7.04	+ 8.75	-1.94	-10.20	16 19 43.04	51 6 32.7
16 25 4.4	7.8	25 37.78	25 16.0	21 15.55	-18.54	-0 7.06	+ 9.81	-2.00	-10.03	16 25 34.73	52 1 30.0
16 28 51.1	9.0	29 24.22	29 6.8	6 31.40	-14.72	-0 7.07	+10.20	-2.03	- 9.90	16 29 21.03	52 16 19.8
16 30 34.8	8.2	31 8.26	30 51.5	11 19.20	-13.59	-0 7.13	+12.10	-2.10	-10.05	16 31 4.46	54 11 35.4
16 38 20.4	8.8	38 53.66	38 31.6	54 17.20	-17.75	-0 7.15	+13.10	-2.15	- 9.70	16 38 49.62	54 28 37.0
16 41 46.1	8.6	42 16.76	42 3.6	57 12.50	-10.14	-0 7.15	+12.61	-2.17	- 9.60	16 42 12.68	54 25 50.1
16 44 28.6	8.5	45 2.88	44 42.3	8 23.05	-18.12	-0 7.03	+ 8.58	-2.05	- 9.70	16 45 0.00	50 14 28.4
16 49 47.0	9.5	50 15.14	50 0.5	28 33.05	-11.60	-0 7.16	+13.37	-2.22	- 9.30	16 50 10.78	54 54 31.8
16 52 41.1	8.3	53 11.92	52 51.3	40 24.35	-16.45	-0 7.15	+12.36	-2.23	- 9.10	16 53 7.59	54 42 35.8
16 54 54.6	9.4	55 28.72	55 11.9	0 37.60	-14.98	-0 7.04	+ 8.06	-2.10	- 8.70	16 55 25.66	50 22 21.0
16 58 42.7	7.5	59 12.14	58 55.4	36 38.35	-13.32	-0 7.16	+12.80	-2.26	- 8.80	16 59 7.70	54 46 27.7
17 2 20.5	7.0	2 49.30	2 25.3	44 56.80	-19.21	-0 7.16	+13.37	-2.27	- 8.70	17 2 44.86	54 38 5.3
17 2 20.5	7.0	2 49.30	2 29.5	44 56.80	-15.85	-0 7.16	+13.42	-2.27	- 8.70	17 2 44.86	54 38 8.7
.....	9.3	5 36.16	5 13.8	58 38.65	-18.02	-0 7.16	+12.83	-2.28	- 8.50	17 5 31.75	54 24 25.3
17 7 13.0	9.1	7 43.00	7 13.3	10 45.35	-24.02	-0 7.15	+11.81	-2.28	- 8.40	17 7 38.63	54 12 12.4
17 7 22.1	8.8	7 52.10	7 34.5	10 45.35	-14.23	-0 7.15	+11.96	-2.28	- 8.40	17 7 47.73	54 12 22.3
17 9 53.6	8.7	10 25.42	10 2.2	7 6.20	-18.73	-0 7.16	+12.34	-2.30	- 8.30	17 10 20.98	54 15 58.7
17 13 29.1	9.0	13 58.26	13 33.1	42 19.55	-20.14	-0 7.16	+12.77	-2.33	- 8.10	17 13 53.66	54 40 45.4
17 17 22.7	8.9	17 55.68	17 31.4	11 4.05	-21.52	-0 7.04	+ 8.16	-2.19	- 7.70	17 17 52.43	50 11 56.7
17 20 57.5	8.6	21 27.20	21 7.7	54 34.40	-15.66	-0 7.17	+13.19	-2.35	- 7.80	17 21 22.58	54 28 38.3
17 24 52.3	8.0	25 23.58	25 5.3	56 3.80	-14.71	-0 7.17	+12.28	-2.37	- 7.60	17 25 18.93	54 27 10.5
17 28 29.7	7.5	28 59.14	28 40.1	56 32.40	-15.27	-0 7.17	+12.40	-2.38	- 7.40	17 28 54.46	54 26 42.9
17 28 29.7	8.0	29 20.52	29 37.9	56 32.40	+13.99	-0 7.17	+12.42	-2.38	- 7.40	17 29 15.84	54 27 12.2
17 33 13.8	8.6	33 46.00	33 29.4	13 32.30	-14.39	-0 7.07	+ 9.54	-2.28	- 7.00	17 33 42.33	51 9 43.1
17 35 45.6	9.2	36 15.88	35 57.2	13 7.90	-14.14	-0 7.16	+12.54	-2.39	- 7.00	17 36 11.25	54 10 11.6
17 38 4.1	6.3	38 33.80	38 14.9	30 30.20	-16.13	-0 7.10	+ 9.55	-2.31	- 6.80	17 38 29.89	51 52 45.4
17 42 42.5	9.0	43 13.02	42 51.4	45 55.90	-17.29	-0 7.18	+12.38	-2.43	- 6.60	17 43 8.19	54 37 23.1*
ZONE 95, JULY 12, 1871.											
15 39 4.3	9.2	39 42.30	39 16.8	33 32.25	-21.79	-0 9.81	+10.16	-1.61	-12.50	15 39 37.60	51 48 54.5
15 40 34.7	8.0	41 10.54	40 49.3	0 7.55	-17.48	-0 9.86	+11.00	-1.65	-12.70	15 41 5.41	53 22 24.6
15 42 6.1	9.5	42 43.88	42 24.0	7 37.30	-16.08	-0 9.87	+12.49	-1.68	-12.75	15 42 38.49	54 14 58.1
15 43 10.8	9.2	43 49.08	43 28.0	21 58.90	-17.14	-0 9.87	+12.09	-1.68	-12.80	15 43 43.72	54 0 35.3
15 43 10.8	9.4	43 49.08	43 20.6	21 58.90	-23.15	-0 9.87	+11.99	-1.68	-12.80	15 43 43.72	54 0 29.1
15 49 22.3	8.0	49 59.48	49 49.0	7 56.00	- 8.48	-0 9.87	+12.63	-1.73	-12.55	15 49 53.90	54 14 49.4
15 52 9.7	8.5	52 48.75	53 2.3	56 19.15	+10.93	-0 9.89	+12.41	-1.76	-12.50	15 52 43.03	54 26 46.3
15 55 56.7	8.3	56 33.42	56 14.8	11 11.05	-16.46	-0 9.76	+ 8.05	-1.69	-11.80	15 56 28.75	50 11 24.5
15 56 53.6	8.2	57 27.12	57 10.9	30 24.25	-12.88	-0 9.90	+12.63	-1.80	-12.40	15 57 21.17	54 52 19.1

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.			Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.		R.A.	Dec.		
h m s		m s	m s	' "	"	m s	"		s	"	h m s	° ' "
15 57 54.3	9.2	58 32.84	58 21.1	45 50.20	-10.26	-0 9.77	+ 8.43	-1.71	-11.85		15 58 28.02	50 36 52.3
16 7 27.0	9.0	8 3.84	7 33.8	9 11.55	-26.53	-0 9.76	+ 8.78	-1.76	-11.50		16 7 58.93	50 13 18.5
16 10 48.2	9.5	11 28.16	11 3.0	29 49.15	-21.98	-0 9.79	+ 9.57	-1.80	-11.50		16 11 23.01	50 52 47.3
16 13 20.0	8.5	13 59.42	13 53.5	3 57.75	- 5.21	-0 9.77	+ 8.92	-1.80	-11.35		16 13 54.37	50 18 55.7
16 14 49.9	9.2	15 26.08	15 6.8	44 44.05	-16.56	-0 9.80	+10.37	-1.84	-11.45		16 15 20.67	51 37 59.9
16 16 14.9	8.6	16 51.18	16 24.1	18 21.85	-21.90	-0 9.87	+12.47	-1.91	-11.65		16 16 45.04	54 4 19.1
16 17 24.5	7.7	18 1.02	17 48.4	35 47.30	-10.77	-0 9.80	+ 9.63	-1.86	-11.40		16 17 55.52	51 47 2.6
16 19 2.4	8.7	19 40.18	19 9.1	19 38.15	-27.03	-0 9.79	+ 9.59	-1.85	-11.25		16 19 34.84	51 2 56.1
16 21 36.9	8.5	22 11.84	21 54.3	58 16.15	-14.42	-0 9.86	+11.85	-1.92	-11.40		16 22 5.79	53 24 33.6
16 24 21.8	9.3	24 54.92	24 21.9	51 20.50	-26.47	-0 9.89	+12.27	-1.97	-11.40		16 24 48.48	54 31 18.5
16 24 58.1	9.2	25 35.24	25 26.4	26 58.75	- 7.67	-0 9.79	+ 9.09	-1.88	-11.05		16 25 29.82	50 55 56.4
16 27 33.6	8.5	28 10.38	27 37.0	58 13.85	-28.80	-0 9.80	+ 9.56	-1.91	-11.00		16 28 4.79	51 24 21.6
16 29 12.4	8.8	29 46.58	29 22.1	46 48.35	-19.62	-0 9.89	+12.60	-2.00	-11.25		16 29 40.03	54 35 59.6
16 30 23.8	7.8	31 2.50	30 36.8	8 59.20	-22.25	-0 9.79	+ 9.72	-1.92	-10.85		16 30 56.92	51 13 44.0
16 31 43.9	8.3	32 18.04	32 16.0	37 35.55	- 1.60	-0 9.89	+13.13	-2.03	-11.20		16 32 11.39	54 45 31.8
16 32 46.9	6.8	33 22.92	33 8.0	12 21.15	-12.35	-0 9.85	+11.43	-1.98	-11.05		16 33 16.74	53 10 34.2
16 32 49.2	8.0	33 23.58	33 6.0	12 21.15	-14.58	-0 9.85	+11.41	-1.98	-11.05		16 33 17.40	53 10 32.0
16 48 10.7	....	48 43.26	48 32.0	12 3.00	- 9.14	-0 9.87	+12.44	-2.11	-10.50		16 48 36.52	54 11 2.2
16 49 58.7	8.3	50 33.03	50 26.0	6 40.50	- 5.65	-0 9.87	+12.45	-2.12	-10.45		16 50 26.22	54 16 28.8
16 51 28.0	8.0	52 2.92	51 33.2	13 0.45	-25.19	-0 9.81	+10.44	-2.07	-10.20		16 51 56.74	52 9 48.1
16 52 24.7	6.5	53 0.26	52 43.4	8 50.45	-14.95	-0 9.76	+ 8.78	-2.02	- 9.95		16 52 54.61	50 14 7.3
16 53 34.7	9.3	54 11.64	53 47.6	11 46.20	-20.80	-0 9.79	+ 9.18	-2.05	-10.00		16 54 5.72	51 11 6.4
16 57 55.0	7.5	58 28.58	58 1.7	35 49.60	-22.50	-0 9.82	+10.55	-2.11	-10.00		16 58 22.15	52 47 4.1
16 58 37.5	7.8	59 13.51	58 56.4	53 51.15	-15.04	-0 9.77	+ 9.07	-2.06	- 9.75		16 59 7.71	50 29 9.1
17 0 14.2	8.7	0 49.60	0 20.5	57 40.45	-25.09	-0 9.80	+ 9.57	-2.09	- 9.75		17 0 43.52	51 25 10.7
17 1 5.0	8.0	1 42.28	1 20.7	3 7.60	-18.25	-0 9.81	+10.69	-2.12	- 9.80		17 1 35.94	52 19 51.8
17 2 31.9	8.0	3 8.94	2 46.6	55 4.05	-19.63	-0 9.77	+ 8.05	-2.07	- 9.60		17 3 3.11	50 27 52.0
17 5 9.7	8.5	5 45.02	5 32.8	32 10.30	-10.65	-0 9.79	+ 9.03	-2.10	- 9.50		17 5 39.04	50 50 56.7
17 19 3.5	9.5	19 39.54	19 21.0	52 40.95	-16.27	-0 9.76	+ 8.77	-2.15	- 8.90		17 19 33.53	50 30 25.5
17 19 48.6	8.8	20 23.40	20 20.8	43 14.20	- 2.23	-0 9.79	+10.18	-2.19	- 9.00		17 20 17.05	51 40 7.9
17 21 6.4	7.5	21 42.12	21 17.8	34 59.75	-21.24	-0 9.76	+ 9.56	-2.16	- 8.85		17 21 36.02	50 48 3.3
17 22 5.2	9.0	22 39.64	22 22.5	46 59.20	-14.69	-0 9.79	+ 9.71	-2.19	- 8.90		17 22 33.29	51 36 10.8
17 25 11.5	7.8	25 45.42	25 29.3	55 29.05	-13.87	-0 9.79	+ 9.20	-2.30	- 8.70		17 25 38.98	51 27 42.6
ZONE 96, JULY 17, 1871.												
16 7 19.3	9.5	7 59.20	8 17.7	14 20.25	+16.05	-0 12.37	+ 9.94	-1.68	-12.50		16 7 51.58	51 8 53.3
16 10 15.5	9.1	10 58.78	10 51.1	14 51.60	- 6.82	-0 12.34	+ 9.11	-1.68	-12.30		16 10 51.36	50 7 59.3
16 19 16.8	....	19 57.46	19 37.4	20 48.05	-17.48	-0 12.37	+ 8.85	-1.76	-12.20		16 19 49.63	51 1 54.8
16 21 20.2	8.0	21 58.56	21 36.0	22 40.85	-19.23	-0 12.40	+10.36	-1.78	-12.25		16 21 50.44	52 0 2.5
16 30 34.8	8.8	31 13.50	30 57.3	11 18.70	-13.10	-0 12.47	+12.28	-1.90	-12.20		16 31 4.56	54 11 35.7
16 38 20.4	9.0	38 58.94	38 30.3	54 11.05	-22.98	-0 12.49	+13.22	-1.96	-11.95		16 38 49.75	54 28 37.1
16 41 46.1	8.8	42 21.98	41 56.6	57 2.00	-20.62	-0 12.49	+12.62	-1.97	-11.85		16 42 12.76	54 25 49.2
16 44 28.6	8.8	45 8.14	44 40.2	8 17.85	-24.67	-0 12.35	+ 8.61	-1.89	-11.35		16 45 0.10	50 14 26.7
16 48 16.6	....	48 53.22	48 28.5	8 24.80	-19.95	-0 12.50	+12.80	-2.01	-11.60		16 48 43.93	54 14 29.6
16 49 47.0	9.5	50 20.33	50 9.6	28 36.15	- 8.50	-0 12.51	+13.66	-2.04	-11.55		16 50 10.80	54 54 31.1
16 52 41.1	8.6	53 17.02	52 49.8	40 18.55	-21.72	-0 12.50	+12.43	-2.05	-11.45		16 53 7.52	54 42 35.4
16 54 54.6	9.6	55 33.82	55 7.2	0 27.75	-24.00	-0 12.38	+ 8.06	-1.95	-11.05		16 55 25.57	50 22 20.7
16 58 42.7	7.8	59 17.34	59 0.3	36 38.15	-13.56	-0 12.50	+12.98	-2.09	-11.25		16 59 7.73	54 46 26.7
17 2 20.5	7.5	2 54.44	2 24.0	44 51.40	-24.33	-0 12.50	+13.51	-2.10	-11.10		17 2 44.83	54 38 4.6
17 2 20.5	7.5	2 54.44	2 28.5	44 51.40	-20.73	-0 12.50	+13.58	-2.10	-11.10		17 2 44.83	54 38 8.3
17 5 29.7	9.2	5 41.30	5 35.0	58 54.45	- 4.97	-0 12.50	+13.31	-2.11	-11.00		17 5 31.71	54 24 21.8
17 5 29.7	8.0	6 5.26	7 19.3	59 14.45	+59.54	-0 12.50	+13.27	-2.12	-11.00		17 5 55.66	54 25 6.4
17 9 53.6	8.6	10 30.54	9 46.0	6 48.55	-35.92	-0 12.50	+12.08	-2.14	-10.80		17 10 20.92	54 15 57.7

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
17 10 2.6	6.5	10 38.48	11 3.8	6 48.55	+20.42	-0 12.50	+12.43	-2.14	-10.80	17 10 28.86	54 16 54.4
17 13 29.1	8.9	14 3.62	13 48.5	42 28.55	-12.07	-0 12.51	+13.08	-2.17	-10.70	17 13 53.83	54 40 43.5
17 17 22.7	9.0	18 0.82	17 44.8	11 10.45	-14.17	-0 12.37	+ 8.41	-2.07	-10.20	17 17 52.36	50 11 56.7
17 20 57.5	8.8	21 32.54	21 6.0	54 29.05	-21.29	-0 12.51	+13.32	-2.20	-10.35	17 21 22.73	54 28 37.0
17 24 52.3	8.6	25 28.92	25 4.0	55 58.50	-20.02	-0 12.51	+12.38	-2.22	-10.20	17 25 19.08	54 27 9.3
17 28 29.7	7.5	29 4.28	28 41.3	56 28.35	-18.49	-0 12.52	+12.54	-2.24	-10.00	17 28 54.39	54 26 42.6
17 28 29.7	8.0	29 25.58	29 38.9	56 28.35	+10.69	-0 12.52	+12.63	-2.24	-10.00	17 29 15.69	54 27 11.9
17 29 44.8	9.5	30 20.06	30 25.2	4 50.35	+ 4.14	-0 12.51	+13.37	-2.24	-10.00	17 30 10.21	54 18 44.5
17 33 13.8	8.4	33 51.08	33 22.3	13 21.25	-24.88	-0 12.41	+ 9.57	-2.17	- 9.65	17 33 42.18	51 9 42.4
17 35 45.6	9.5	36 21.08	35 54.0	13 1.75	-21.94	-0 12.50	+12.61	-2.27	- 9.70	17 36 11.23	54 10 8.7
17 38 4.1	....	38 39.02	38 10.0	30 20.35	-24.75	-0 12.44	+ 9.55	-2.21	- 9.50	17 38 29.87	51 52 45.2
ZONE 97, JULY 20, 1871.											
16 28 19.6	9.8	28 59.32	28 51.9	21 36.20	- 6.36	-0 13.29	+ 8.16	-1.74	-12.40	16 28 50.69	50 1 17.3
16 30 59.0	9.1	31 38.86	31 23.9	41 39.05	-12.72	-0 13.30	+ 8.81	-1.76	-12.40	16 31 30.04	50 41 9.6
16 35 4.3	9.1	35 44.96	35 18.6	10 46.70	-22.62	-0 13.29	+ 7.95	-1.78	-12.20	16 35 36.19	50 11 52.7
16 37 14.1	9.6	37 54.20	37 31.5	50 13.65	-19.31	-0 13.31	+ 8.21	-1.80	-12.20	16 37 45.29	50 32 30.0
16 39 58.9	8.6	40 40.32	40 29.0	29 2.85	- 9.54	-0 13.32	+ 9.67	-1.82	-12.10	16 40 31.28	50 53 53.1
16 42 24.9	8.8	43 5.16	42 43.9	49 28.50	-18.11	-0 13.31	+ 9.37	-1.83	-12.00	16 42 56.17	50 33 19.4
16 44 25.5	8.3	45 5.68	44 44.2	50 28.25	-18.29	-0 13.31	+ 8.31	-1.84	-11.90	16 44 56.67	50 32 19.2
16 46 51.5	9.2	47 29.74	47 7.0	0 40.40	-18.55	-0 13.36	+10.25	-1.89	-12.10	16 47 20.19	52 22 9.4
16 49 4.3	8.8	49 44.40	49 17.4	19 28.45	-23.20	-0 13.30	+ 8.74	-1.86	-11.80	16 49 35.44	50 3 16.2
16 50 43.0	8.8	51 27.14	51 6.6	50 25.40	-13.56	-0 13.33	+ 9.34	-1.90	-11.90	16 51 17.77	51 32 29.9
16 52 44.2	8.9	53 24.70	53 54.1	30 15.05	-25.47	-0 13.35	+ 9.52	-1.92	-11.90	16 53 16.63	51 52 23.5
16 54 33.4	7.7	55 14.02	54 48.9	29 39.45	-21.19	-0 13.32	+ 8.66	-1.91	-11.70	16 55 4.77	50 53 9.0
16 59 30.1	9.5	59 41.86	59 29.0	7 26.30	-11.04	-0 13.30	+ 8.55	-1.92	-11.50	16 59 32.73	50 15 34.1
17 4 43.9	6.8	5 22.62	4 54.2	22 44.50	-23.93	-0 13.32	+ 9.26	-1.97	-11.40	17 5 13.20	51 0 5.6
17 6 40.7	9.6	7 20.40	6 56.0	19 40.45	-20.97	-0 13.31	+ 8.83	-1.96	-11.30	17 7 11.20	50 3 13.0
17 11 3.3	8.7	11 42.74	11 16.7	12 14.25	-22.29	-0 13.31	+ 8.32	-1.98	-11.10	17 11 33.47	50 10 39.0
17 13 5.3	8.0	13 44.80	13 28.5	38 47.50	-13.81	-0 13.33	+ 9.43	-2.01	-11.10	17 13 35.34	50 44 16.0
17 16 31.9	9.1	17 11.82	16 49.0	38 36.05	-19.31	-0 13.32	+ 9.31	-2.03	-11.00	17 17 2.33	50 44 23.2
17 19 3.5	9.3	19 42.90	19 20.3	52 35.45	-19.24	-0 13.32	+ 8.79	-2.04	-10.90	17 19 33.44	50 30 24.3
17 20 57.0	9.6	21 36.66	21 11.1	9 3.30	-21.92	-0 13.31	+ 8.82	-2.04	-10.80	17 21 27.26	50 13 54.5
17 24 17.9	8.7	24 57.20	24 31.1	42 16.50	-22.14	-0 13.32	+ 8.87	-2.07	-10.70	17 24 47.65	50 40 42.4
17 26 3.5	8.3	26 43.64	26 20.2	42 50.60	-19.86	-0 13.32	+ 9.03	-2.07	-10.60	17 26 34.08	50 40 11.4
17 28 39.3	8.9	29 18.32	29 8.5	54 26.70	- 8.35	-0 13.32	+ 9.35	-2.08	-10.50	17 29 8.78	50 28 48.2
17 31 27.1	9.0	32 3.60	31 45.7	36 0.40	-14.49	-0 13.37	+10.81	-2.16	-10.60	17 31 53.37	52 47 10.6
17 33 21.4	8.7	34 1.36	33 34.1	11 22.70	-23.39	-0 13.32	+ 8.09	-2.10	-10.40	17 33 51.85	50 11 37.6
17 35 38.0	8.5	36 13.28	35 47.1	36 11.75	-21.70	-0 13.35	+ 9.74	-2.15	-10.30	17 36 3.32	51 46 52.8
17 37 59.5	7.8	38 37.68	38 9.1	51 8.00	-23.82	-0 13.35	+ 9.39	-2.15	-10.20	17 38 27.77	51 31 55.0
17 40 8.9	9.1	40 47.26	40 21.6	16 39.15	-22.06	-0 13.32	+ 8.06	-2.13	-10.10	17 40 37.72	50 6 25.2
17 41 22.1	7.7	42 0.02	41 58.7	17 44.55	- 1.12	-0 13.32	+ 8.62	-2.14	-10.10	17 41 50.48	50 5 41.6
17 45 9.3	9.4	45 48.80	45 23.0	8 52.70	-22.09	-0 13.32	+ 8.79	-2.16	- 9.90	17 45 39.20	50 14 14.3
17 47 45.3	9.3	48 23.40	48 17.7	8 37.50	- 4.78	-0 13.34	+ 9.97	-2.20	- 9.80	17 48 13.49	51 14 48.9
17 52 32.3	8.7	53 11.34	52 44.2	53 43.35	-23.09	-0 13.33	+ 9.00	-2.19	- 9.60	17 53 1.62	50 29 25.7
17 57 3.8	9.3	57 41.82	57 23.0	23 0.40	-15.84	-0 13.34	+ 9.44	-2.23	- 9.45	17 57 31.93	51 0 18.0
17 58 56.8	7.3	59 33.64	59 11.4	45 4.70	-18.45	-0 13.35	+ 9.33	-2.25	- 9.40	17 59 23.57	51 38 11.7
18 1 26.5	8.6	2 3.46	1 43.1	30 49.95	-16.86	-0 13.37	+ 9.79	-2.27	- 9.30	18 1 53.30	51 52 28.2
18 4 29.3	8.2	5 5.60	4 41.8	22 51.20	-19.62	-0 13.38	+10.41	-2.28	- 9.20	18 4 55.38	52 0 27.3
18 6 55.9	7.9	7 32.88	7 26.8	31 11.30	- 5.04	-0 13.38	+ 9.97	-2.29	- 9.10	18 7 22.69	51 52 22.2
18 9 3.9	9.0	9 42.28	9 27.0	57 44.85	-13.05	-0 13.34	+ 8.80	-2.26	- 8.90	18 9 32.50	50 25 40.5
18 11 10.1	7.5	11 48.22	11 23.4	11 3.15	-21.25	-0 13.33	+ 8.03	-2.26	- 8.90	18 11 38.51	50 12 14.0
18 12 58.3	9.0	13 37.14	13 8.0	33 57.90	-24.61	-0 13.34	+ 9.35	-2.28	- 8.80	18 13 27.26	50 49 17.9

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
18 16 22.9	9.4	17 1.78	16 39.3	25 22.45	-18.97	-0 13.35	+ 8.69	-2.30	- 8.60	18 16 51.84	50 57 59.7
18 18 40.3	8.4	19 19.28	18 57.9	25 27.00	-18.04	-0 13.35	+ 8.70	-2.31	- 8.50	18 19 9.34	50 57 57.0
ZONE 98, JULY 22, 1871.											
16 30 59.0	9.0	31 39.28	31 11.0	41 26.95	-24.00	-0 13.83	+ 8.68	-1.73	-12.65	16 31 29.96	50 41 9.6
16 35 4.3	8.9	35 45.34	35 17.7	10 43.55	-23.65	-0 13.84	+ 7.99	-1.74	-12.50	16 35 36.06	50 11 54.1
16 39 58.9	8.5	40 40.72	40 15.3	28 49.15	-21.45	-0 13.84	+ 9.58	-1.78	-12.45	16 40 31.20	50 53 54.0
16 42 24.9	8.9	43 5.64	42 41.3	49 25.90	-20.66	-0 13.83	+ 9.38	-1.79	-12.35	16 42 56.17	50 33 18.7
16 44 25.5	8.6	45 6.12	44 43.9	50 27.10	-18.88	-0 13.84	+ 8.40	-1.80	-12.25	16 44 56.62	50 32 19.1
16 47 10.2	8.6	47 48.72	.....	.....	.....	-0 13.88	.....	-1.86	.....	16 47 38.68	.....
16 49 4.3	8.5	49 44.72	49 18.4	19 26.95	-22.60	-0 13.83	+ 8.81	-1.82	-12.10	16 49 35.27	50 3 17.6
16 50 43.0	8.8	51 27.54	50 57.6	50 14.80	-24.89	-0 13.86	+ 9.28	-1.87	-12.20	16 51 17.67	51 32 28.4
16 52 44.2	8.8	53 25.04	53 4.3	30 22.05	-17.23	-0 13.87	+ 9.82	-1.88	-12.15	16 53 16.49	51 52 24.3
16 54 33.4	7.8	55 14.48	54 44.0	29 33.90	-25.74	-0 13.85	+ 9.72	-1.87	-12.05	16 55 4.74	50 53 10.3
16 59 30.1	9.6	59 42.14	59 29.4	7 26.85	-12.57	-0 13.83	+ 8.58	-1.89	-11.85	16 59 32.51	50 15 31.3
17 2 17.1	9.4	2 56.48	2 28.9	50 15.50	-22.98	-0 13.86	+ 9.37	-1.93	-11.85	17 2 46.45	51 32 33.9
17 4 43.9	6.4	5 23.22	4 50.0	22 39.80	-27.97	-0 13.85	+ 9.27	-1.93	-11.70	17 5 13.31	51 0 5.5
17 6 40.7	9.7	7 21.00	7 10.8	19 52.80	- 8.77	-0 13.83	+ 9.11	-1.93	-11.60	17 7 11.31	50 3 12.3
17 11 3.3	8.6	11 43.14	11 17.6	12 13.50	-21.86	-0 13.84	+ 8.43	-1.95	-11.45	17 11 33.37	50 10 39.5
17 13 5.3	8.4	13 45.20	13 18.7	38 37.25	-22.45	-0 13.86	+ 9.37	-1.97	-11.45	17 13 35.25	50 44 16.8
17 16 31.9	9.0	17 12.18	16 41.9	38 28.20	-25.66	-0 13.85	+ 9.28	-1.99	-11.35	17 17 2.20	50 44 23.8
17 19 3.5	9.1	19 43.24	19 16.4	52 29.40	-22.81	-0 13.85	+ 8.82	-2.00	-11.25	17 19 33.29	50 30 26.0
17 20 57.0	9.7	21 37.08	21 9.0	8 59.85	-24.06	-0 13.85	+ 8.90	-2.00	-11.15	17 21 27.18	50 13 55.1
17 24 17.9	8.6	24 57.56	24 34.0	42 18.70	-19.93	-0 13.85	+ 9.03	-2.03	-11.10	17 24 47.52	50 40 41.8
17 26 3.5	8.5	26 44.10	26 17.4	42 47.05	-22.66	-0 13.85	+ 9.09	-2.04	-11.00	17 26 34.04	50 40 11.4
17 28 39.3	8.9	29 18.82	28 58.2	54 16.25	-17.55	-0 13.85	+ 9.34	-2.05	-10.90	17 29 8.78	50 28 48.6
17 31 27.1	8.8	32 4.00	31 36.5	35 52.35	-22.27	-0 13.89	+ 10.81	-2.12	-10.95	17 31 53.29	52 47 10.1
17 33 21.4	8.8	34 1.78	33 38.6	11 24.85	-19.88	-0 13.84	+ 8.27	-2.07	-10.75	17 33 51.78	50 11 38.4
17 35 38.0	8.4	36 13.70	35 49.8	36 13.40	-19.79	-0 13.88	+ 9.91	-2.12	-10.75	17 36 3.24	51 46 52.3
17 37 59.5	7.5	38 38.06	38 9.8	51 7.30	-23.57	-0 13.88	+ 10.59	-2.12	-10.65	17 38 27.65	51 31 56.3
17 40 8.9	9.0	40 47.68	40 17.4	16 33.30	-26.01	-0 13.85	+ 8.11	-2.10	-10.50	17 40 37.64	50 6 26.3
17 42 18.3	8.0	42 57.96	42 31.0	9 8.10	-23.12	-0 13.86	+ 8.96	-2.11	-10.40	17 42 47.87	50 13 56.0
17 45 9.3	9.2	45 49.16	45 31.4	8 58.00	-15.16	-0 13.85	+ 9.05	-2.12	-10.30	17 45 39.07	50 14 15.3
17 47 45.3	9.3	48 23.86	48 3.7	8 23.30	-16.93	-0 13.87	+ 9.94	-2.16	-10.25	17 48 13.46	51 14 50.0
17 52 32.3	8.6	53 11.72	52 56.7	53 52.90	-12.78	-0 13.86	+ 9.32	-2.16	-10.05	17 53 1.50	50 29 25.9
17 54 32.5	...	55 12.90	55 8.0	26 40.75	- 4.04	-0 13.89	+ 10.39	-2.21	-10.05	17 55 2.25	51 56 48.6
17 57 3.8	9.2	57 42.18	57 18.3	22 54.42	-20.04	-0 13.87	+ 9.51	-2.20	- 9.90	17 57 31.79	51 0 19.0
17 58 56.8	7.5	59 33.98	59 13.9	45 6.05	-16.70	-0 13.88	+ 10.80	-2.22	- 9.80	17 59 23.41	51 38 12.8
18 1 26.5	8.6	2 3.82	1 40.5	30 47.10	-19.26	-0 13.89	+ 9.95	-2.24	- 9.80	18 1 53.17	51 52 27.9
18 4 29.3	7.9	5 5.90	4 41.7	22 49.95	-19.95	-0 13.90	+ 10.57	-2.26	- 9.70	18 4 55.18	52 0 27.4
18 6 55.9	8.0	7 33.18	7 1.5	30 49.70	-26.12	-0 13.90	+ 9.82	-2.26	- 9.60	18 7 22.50	51 52 21.7
18 9 3.9	8.8	9 42.62	9 25.0	57 41.50	-15.01	-0 13.87	+ 8.89	-2.23	- 9.45	18 9 32.34	50 25 41.0
18 11 10.1	8.4	11 48.60	11 26.0	11 4.00	-19.37	-0 13.86	+ 8.22	-2.24	- 9.35	18 11 38.38	50 12 14.3
18 12 58.3	9.1	13 37.46	13 11.9	34 0.25	-21.57	-0 13.87	+ 9.57	-2.26	- 9.30	18 13 27.07	50 49 17.9
18 16 22.9	9.4	17 2.10	16 38.9	25 21.25	-19.56	-0 13.88	+ 8.85	-2.28	- 9.20	18 16 51.65	50 57 59.4
ZONE 99, JULY 23, 1871.											
16 40 10.9	7.8	40 50.66	40 31.7	36 27.10	-15.74	-0 13.95	+ 10.05	-1.78	-12.80	16 40 40.83	51 46 22.5
16 42 37.3	9.7	43 17.58	42 53.0	25 6.90	-20.74	-0 13.94	+ 8.77	-1.78	-12.65	16 43 7.92	50 57 37.4
16 44 56.8	9.0	45 38.40	45 16.5	28 18.40	-18.48	-0 13.94	+ 9.55	-1.79	-12.55	16 45 28.72	50 54 29.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	° "	"	m s	"	s	"	h m s	° ' "
16 47 20.7	7.7	47 59.48	47 33.4	2 19.70	-21.82	-0 13.95	+ 9.72	-1.81	-12.55	16 47 49.65	51 20 26.1
16 50 22.2	8.2	51 2.58	50 44.0	8 47.20	-15.59	-0 13.94	+10.08	-1.83	-12.45	16 50 52.74	51 14 6.3
16 52 24.4	8.5	53 5.68	52 45.7	4 31.25	-16.73	-0 13.95	+10.33	-1.85	-12.40	16 52 55.78	51 18 22.1
16 54 11.5	9.6	54 52.42	54 37.7	17 37.25	-12.62	-0 13.92	+ 8.58	-1.83	-12.20	16 54 42.82	50 5 19.3
16 59 5.7	7.5	59 45.42	59 34.6	15 52.15	- 9.07	-0 13.94	+ 9.24	-1.88	-12.20	16 59 35.49	51 7 10.1
17 2 17.1	9.8	2 56.72	2 28.8	50 14.35	-23.23	-0 13.94	+ 9.36	-1.91	-12.15	17 2 46.63	51 32 35.1
17 4 38.5	8.7	5 16.78	4 49.8	54 7.75	-22.11	-0 13.96	+11.39	-1.94	-12.15	17 5 6.40	52 28 45.6
17 6 46.3	9.1	7 25.60	6 59.8	0 4.35	-22.57	-0 13.94	+ 9.21	-1.93	-12.00	17 7 15.50	51 22 47.3
17 11 5.1	9.3	11 46.90	11 26.3	53 38.80	-17.17	-0 13.92	+ 9.21	-1.94	-11.80	17 11 36.98	50 29 20.0
17 13 5.3	7.5	13 45.28	13 26.9	38 44.55	-15.59	-0 13.93	+ 9.56	-1.95	-11.75	17 13 35.28	50 44 16.7
17 14 35.3	8.8	15 15.62	15 8.2	23 31.35	- 6.37	-0 13.91	+ 8.76	-1.95	-11.65	17 15 5.80	49 59 39.1
17 16 46.9	8.0	17 24.18	17 3.9	34 59.50	-16.81	-0 13.94	+ 9.68	-2.00	-11.75	17 17 13.85	51 48 2.0
17 18 53.8	9.2	19 32.68	19 7.6	23 52.25	-21.15	-0 13.93	+ 9.77	-1.99	-11.60	17 19 22.55	50 59 5.9
17 23 44.2	8.0	24 21.42	.....	.....	.....	-0 13.95	.....	-2.04	.....	17 24 10.96	.....
17 25 37.0	8.5	26 16.76	25 55.2	47 18.55	-17.96	-0 13.94	+10.02	-2.04	-11.40	17 26 6.40	51 35 45.6
17 28 4.2	7.8	28 42.88	28 18.5	36 44.75	-20.65	-0 13.92	+ 8.99	-2.04	-11.25	17 28 32.72	50 46 16.7
17 30 8.6	10.0	30 47.72	30 33.5	28 37.45	-11.98	-0 13.93	+ 9.74	-2.05	-11.20	17 30 37.50	50 54 34.2
17 33 54.4	8.4	34 34.10	34 24.8	38 43.30	- 7.88	-0 13.92	+ 9.64	-2.06	-11.05	17 34 23.90	50 44 33.8
17 37 25.8	9.3	38 6.14	37 46.1	19 29.50	-17.19	-0 13.91	+ 8.98	-2.07	-10.90	17 37 56.09	50 3 39.0
17 39 22.8	9.5	40 2.64	39 44.5	5 23.00	-15.48	-0 13.91	+ 8.20	-2.08	-10.85	17 39 52.52	50 17 47.1
17 41 22.1	7.8	42 0.48	41 27.2	17 15.50	-28.59	-0 13.91	+ 8.27	-2.09	-10.75	17 41 50.40	50 5 42.4
17 42 56.9	9.6	43 35.18	43 18.3	41 7.20	-14.33	-0 13.92	+ 8.83	-2.11	-10.75	17 43 24.92	50 42 6.1
17 48 56.6	7.5	49 36.12	49 12.7	58 0.20	-19.96	-0 13.92	+ 8.94	-2.13	-10.50	17 49 25.90	50 25 9.9
17 52 22.9	9.3	53 3.14	52 38.5	25 18.55	-20.74	-0 13.93	+ 8.85	-2.16	-10.40	17 52 52.75	50 57 52.0
17 58 39.8	8.7	59 17.92	58 54.9	13 1.25	-19.31	-0 13.93	+ 9.78	-2.20	-10.20	17 59 7.43	51 10 14.0
18 0 58.2	8.8	1 36.58	1 14.6	48 31.77	-18.30	-0 13.94	+10.35	-2.22	-10.10	18 1 25.97	51 34 46.0
ZONE 100, JULY 27, 1871.											
16 40 10.9	....	40 51.02	40 45.8	36 39.45	- 4.31	-0 14.53	+ 9.98	-1.68	-13.50	16 40 40.71	51 46 21.4
16 44 56.8	....	45 38.74	45 28.8	28 29.70	- 8.36	-0 14.52	+ 9.53	-1.69	-13.25	16 45 28.58	50 54 28.4
16 50 22.2	....	51 3.06	50 52.5	8 53.50	- 8.89	-0 14.52	+ 9.98	-1.74	-13.15	16 50 52.73	51 14 6.5
16 59 5.7	7.5	59 45.94	59 34.2	15 50.75	- 9.83	-0 14.52	+ 9.02	-1.80	-12.95	16 59 35.51	51 7 10.4
17 4 38.5	8.5	5 17.22	4 57.1	54 14.45	-16.39	-0 14.55	+11.29	-1.85	-12.95	17 5 6.34	52 28 44.3
17 7 25.4	8.5	8 4.94	7 37.1	54 39.15	-23.18	-0 14.53	+10.28	-1.85	-12.80	17 7 54.30	51 28 12.9
17 18 53.8	9.0	19 33.10	19 4.3	23 47.75	-23.74	-0 14.52	+ 9.53	-1.91	-12.40	17 19 22.46	50 59 7.4
17 21 46.7	8.8	22 26.68	21 53.8	12 29.75	-27.61	-0 14.51	+ 9.30	-1.93	-12.35	17 22 15.98	51 10 22.3
17 25 37.0	7.2	26 17.32	25 40.8	47 5.75	-30.35	-0 14.52	+ 9.56	-1.96	-12.30	17 26 6.46	51 35 45.2
17 28 4.2	7.8	28 43.50	28 15.9	36 42.10	-23.37	-0 14.50	+ 8.77	-1.96	-12.15	17 28 32.84	50 46 16.1
17 33 54.4	8.0	34 34.70	34 12.7	38 31.45	-18.63	-0 14.50	+ 9.33	-1.99	-11.95	17 34 23.99	50 44 34.2
17 37 25.8	9.5	38 6.80	37 38.3	19 21.90	-24.49	-0 14.49	+ 8.67	-2.00	-11.80	17 37 56.24	50 3 38.7
17 39 22.8	9.5	40 3.02	39 47.1	5 26.60	-13.51	-0 14.49	+ 8.03	-2.02	-11.75	17 39 52.38	50 17 45.0
17 41 22.1	7.0	42 1.10	42 22.0	18 0.75	+17.95	-0 14.49	+ 8.47	-2.02	-11.70	17 41 50.51	50 5 43.5
17 48 56.6	8.0	49 36.48	49 11.8	57 57.75	-21.07	-0 14.50	+ 8.76	-2.07	-11.45	17 49 25.74	50 25 10.7
17 58 39.8	9.0	59 18.44	58 46.5	12 54.95	-26.78	-0 14.51	+ 9.44	-2.13	-11.20	17 59 7.44	51 10 12.0
18 0 58.2	8.9	1 37.06	1 27.2	48 41.75	- 8.24	-0 14.52	+10.32	-2.16	-11.10	18 1 25.93	51 34 45.6
ZONE 101, AUGUST 2, 1871.											
17 4 43.9	6.8	5 25.04	4 56.2	22 39.45	-24.26	-0 15.97	+ 9.15	-1.69	-13.90	17 5 13.25	51 0 7.1
17 11 3.3	8.6	11 44.94	11 22.6	12 12.35	-19.20	-0 15.94	+ 8.29	-1.72	-13.65	17 11 33.30	50 10 40.8
17 12 39.9	9.3	13 21.54	13 10.5	30 12.90	- 9.29	-0 15.96	+ 8.57	-1.74	-13.70	17 13 9.69	50 52 51.0

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
17 14 27.0	9.2	15 11.52	14 43.8	40 6.10	-23.47	-0 15.95	+ 8.19	-1.75	-13.65	17 14 59.70	50 42 43.9
17 16 31.9	8.8	17 14.16	16 47.0	38 28.00	-23.04	-0 15.95	+ 9.13	-1.76	-13.60	17 17 2.31	50 44 24.1
17 17 22.7	8.8	18 4.06	17 41.3	10 57.50	-19.59	-0 15.94	+ 7.95	-1.76	-13.55	17 17 52.34	50 11 57.2
17 18 36.9	9.2	19 18.52	18 56.0	50 45.80	-18.74	-0 15.97	+ 9.32	-1.80	-13.65	17 19 6.41	51 32 11.5
17 20 51.4	7.0	21 33.98	21 4.7	50 28.20	-24.92	-0 15.95	+ 8.13	-1.79	-13.50	17 21 22.12	50 32 22.6
17 22 13.3	6.5	22 51.52	22 24.5	28 53.85	-21.80	-0 16.00	+ 11.47	-1.83	-13.70	17 22 39.00	52 54 3.7
17 23 45.1	9.2	24 25.64	24 3.0	17 34.00	-18.59	-0 15.98	+ 10.37	-1.83	-13.60	17 24 13.34	52 5 26.3
17 30 8.6	...	30 49.46	30 44.5	28 43.00	-4.22	-0 15.96	+ 9.55	-1.85	-13.30	17 30 37.41	50 54 33.4
17 33 21.4	8.4	34 3.78	33 32.5	11 15.20	-26.82	-0 15.94	+ 7.89	-1.86	-13.20	17 33 51.89	50 11 38.1
17 33 59.8	8.3	34 39.54	34 32.6	50 2.40	-5.87	-0 15.95	+ 8.20	-1.87	-13.20	17 34 27.55	50 33 12.4
17 37 25.8	8.7	38 7.94	37 46.6	19 23.95	-18.30	-0 15.94	+ 8.76	-1.88	-13.05	17 37 56.05	50 3 40.4
17 38 14.9	7.0	38 57.02	38 32.3	50 17.55	-21.01	-0 15.95	+ 8.14	-1.90	-13.10	17 38 44.99	50 32 43.7
17 39 22.8	8.7	40 4.30	39 40.5	5 15.20	-20.35	-0 15.94	+ 7.85	-1.90	-13.05	17 39 52.33	50 17 46.8
17 40 8.9	9.1	40 49.62	40 33.1	16 41.90	-14.16	-0 15.94	+ 8.14	-1.90	-13.00	17 40 37.69	50 6 26.9
17 41 22.1	6.5	42 2.36	41 34.1	17 17.60	-24.30	-0 15.94	+ 8.14	-1.91	-13.00	17 41 50.43	50 5 41.5
17 42 56.9	9.1	43 36.90	43 12.5	40 56.45	-20.69	-0 15.95	+ 8.44	-1.93	-13.00	17 43 24.79	50 42 7.1
17 45 9.3	9.3	45 50.98	45 33.3	8 54.15	-15.16	-0 15.94	+ 8.87	-1.93	-12.90	17 45 38.99	50 14 16.2
17 46 52.3	9.1	47 30.76	47 5.8	59 7.50	-20.04	-0 15.97	+ 10.06	-1.96	-12.95	17 47 18.43	51 23 59.7
17 47 45.3	9.3	48 25.80	48 44.0	8 52.40	+15.25	-0 15.96	+ 9.91	-1.97	-12.90	17 48 13.50	51 14 50.3
17 48 56.6	8.0	49 38.10	49 19.3	57 59.80	-16.04	-0 15.95	+ 8.78	-1.96	-12.80	17 49 26.02	50 25 11.0
17 52 22.9	9.5	53 5.10	52 34.8	25 10.25	-25.55	-0 15.96	+ 8.45	-1.98	-12.75	17 52 52.86	50 57 52.0
17 53 15.4	2.0	53 54.64	53 28.6	52 52.00	-21.67	-0 15.97	+ 9.82	-2.00	-12.80	17 53 42.23	51 30 15.7
18 3 19.7	9.0	4 1.00	3 31.0	56 5.55	-25.57	-0 15.95	+ 8.18	-2.04	-12.40	18 3 48.82	50 27 0.6
18 4 19.6	8.2	5 0.48	4 32.5	30 58.60	-23.66	-0 15.96	+ 8.63	-2.05	-12.40	18 4 48.19	50 52 10.2
18 6 9.8	7.2	6 50.26	6 26.1	0 35.10	-20.66	-0 15.95	+ 8.07	-2.05	-12.30	18 6 38.10	50 22 32.3
18 7 27.5	9.0	8 10.98	7 48.2	47 2.75	-19.37	-0 15.95	+ 8.67	-2.06	-12.30	18 7 58.75	50 36 11.6
18 8 33.3	9.5	9 11.96	9 1.1	15 0.70	-10.75	-0 15.96	+ 8.77	-2.08	-12.20	18 8 59.58	51 8 22.9
18 8 33.3	9.2	9 13.86	.....	.....	.....	-0 15.96	.....	-2.08	.....	18 9 1.48	.....
18 9 58.8	9.0	10 39.14	10 52.2	25 9.90	+11.05	-0 15.96	+ 8.68	-2.08	-12.25	18 10 26.80	50 58 35.8
18 11 53.9	6.8	12 33.56	12 9.9	27 24.35	-19.99	-0 15.96	+ 9.14	-2.09	-12.15	18 12 21.22	50 55 51.6
18 12 57.7	8.3	13 39.02	13 21.7	49 7.65	-14.71	-0 15.95	+ 9.28	-2.09	-12.15	18 13 26.78	50 34 14.0
18 13 45.0	9.3	14 26.61	14 49.0	23 59.05	+18.87	-0 15.98	+ 9.64	-2.10	-12.15	18 14 14.23	50 59 56.8
18 13 45.0	9.4	14 27.76	14 41.6	23 59.05	+11.63	-0 15.98	+ 9.72	-2.10	-12.15	18 14 15.38	50 59 49.7
18 15 9.4	8.8	15 48.74	15 26.5	53 36.05	-18.50	-0 15.98	+ 10.06	-2.12	-12.10	18 15 36.22	51 29 43.4
18 16 33.7	6.0	17 12.90	16 47.0	5 38.85	-21.68	-0 15.97	+ 8.99	-2.12	-12.05	18 17 0.45	51 17 37.0
18 17 38.0	9.0	18 22.38	17 56.9	52 36.55	-21.71	-0 15.96	+ 8.72	-2.11	-12.00	18 18 10.13	50 30 39.4
18 18 40.3	8.8	19 21.64	19 0.8	25 23.20	-17.54	-0 15.97	+ 8.66	-2.13	-11.95	18 19 9.26	50 57 57.3
18 20 6.7	8.4	20 46.96	20 22.1	39 45.50	-21.11	-0 15.96	+ 9.53	-2.13	-11.90	18 20 34.64	50 43 32.8
18 21 19.1	8.4	22 0.72	21 27.5	59 11.10	-28.33	-0 15.96	+ 8.91	-2.13	-11.85	18 21 48.48	50 23 59.8
18 28 5.7	8.5	28 47.88	28 26.1	53 24.00	-18.56	-0 15.96	+ 8.97	-2.16	-11.60	18 28 35.61	50 29 59.4
18 30 0.8	8.6	30 40.98	30 14.1	38 47.50	-22.30	-0 15.98	+ 10.32	-2.20	-11.60	18 30 28.36	51 44 34.1
18 30 55.4	7.6	31 36.82	31 15.7	22 37.65	-17.77	-0 15.97	+ 9.28	-2.19	-11.55	18 31 24.40	51 0 47.8
18 32 48.9	9.4	33 31.42	33 4.2	42 28.20	-23.07	-0 15.96	+ 8.86	-2.19	-11.45	18 33 19.10	50 40 52.4
18 33 44.0	8.5	34 25.66	34 3.8	12 13.50	-18.69	-0 15.95	+ 8.34	-2.18	-11.40	18 34 13.47	50 11 11.2
18 35 44.8	8.6	36 27.14	36 4.8	14 57.20	-19.14	-0 15.96	+ 8.99	-2.19	-11.30	18 36 14.95	50 8 28.6
18 37 3.9	9.0	37 46.18	37 27.3	41 43.80	-16.03	-0 15.95	+ 8.75	-2.21	-11.30	18 37 33.85	50 41 45.3
18 38 16.7	8.0	38 56.84	38 32.9	23 9.85	-20.14	-0 15.97	+ 9.40	-2.22	-11.30	18 38 44.43	51 0 16.2
18 39 41.8	8.1	40 23.76	40 0.7	54 39.51	-31.20	-0 15.96	+ 9.24	-2.22	-11.20	18 40 11.48	50 28 35.8
18 41 28.2	9.0	42 9.16	41 45.0	30 46.45	-20.45	-0 15.98	+ 8.64	-2.24	-11.15	18 41 56.76	50 52 39.8
18 43 25.5	9.1	44 7.20	43 37.5	55 45.80	-25.32	-0 15.96	+ 8.09	-2.23	-11.05	18 43 54.94	50 27 35.8
18 45 20.5	9.1	46 1.86	45 37.5	42 52.70	-20.70	-0 15.96	+ 9.01	-2.25	-11.00	18 45 49.54	50 40 35.1
18 46 50.9	8.2	47 32.94	47 7.4	23 34.80	-21.48	-0 15.97	+ 9.51	-2.26	-10.95	18 47 20.53	50 59 53.3
18 47 55.8	7.5	48 36.58	48 19.1	28 42.75	-14.77	-0 15.97	+ 9.53	-2.26	-10.90	18 48 24.20	50 54 52.5
18 49 38.4	5.0	50 20.16	50 35.4	49 57.38	-38.10	-0 15.96	+ 8.17	-2.26	-10.85	18 50 7.88	50 33 13.8
18 50 41.0	9.4	51 24.16	51 12.9	58 1.20	-9.64	-0 15.96	+ 8.87	-2.26	-10.80	18 51 11.92	50 25 39.6
18 51 34.3	8.7	52 16.36	52 7.0	38 57.35	-7.97	-0 15.96	+ 9.50	-2.27	-10.80	18 52 4.04	50 44 46.0

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
18 54 8.3	8.8	54 50.00	54 26.9	30 6.50	-19.51	-0 15.97	+ 8.50	-2.29	-10.65	18 54 37.64	50 53 25.3
18 55 24.0	6.0	56 5.50	55 33.4	45 14.50	-27.27	-0 15.96	+ 8.09	-2.29	-10.60	18 55 53.21	50 38 9.7
18 56 34.7	5.0	57 17.24	56 47.7	2 1.60	-25.20	-0 15.96	+ 8.35	-2.29	-10.55	18 57 5.03	50 21 25.3
18 59 10.0	8.9	59 52.60	59 24.8	54 37.85	-23.60	-0 15.96	+ 9.22	-2.30	-10.45	18 59 40.36	50 28 52.5
19 3 34.5	8.0	4 16.34	4 4.7	56 5.70	- 9.68	-0 15.98	+ 9.44	-2.34	-10.30	19 4 3.85	51 27 40.5
19 4 23.9	8.2	5 5.96	5 13.4	29 53.10	+ 5.95	-0 15.99	+10.94	-2.36	-10.25	19 4 53.35	51 54 10.5
19 6 23.2	8.6	7 5.78	6 39.1	11 37.90	-22.40	-0 15.97	+ 9.16	-2.35	-10.15	19 6 53.38	51 11 56.4
19 7 23.8	8.8	8 6.26	7 40.2	38 21.05	-21.63	-0 15.98	+10.21	-2.36	-10.10	19 7 53.72	51 45 15.4
ZONE 102, AUGUST 3, 1871.											
17 11 3.3	9.0	11 45.10	11 14.2	12 7.05	-26.49	-0 16.19	+ 8.09	-1.70	-13.85	17 11 33.23	50 10 37.3
17 12 39.9	9.5	13 21.62	13 2.8	30 6.10	-15.88	-0 16.21	+ 8.41	-1.72	-13.90	17 13 9.54	50 52 49.7
17 14 27.0	9.0	15 11.72	14 45.4	40 6.45	-22.29	-0 16.20	+ 8.14	-1.73	-13.85	17 14 59.67	50 42 43.3
17 16 31.9	8.8	17 14.44	16 52.9	38 32.25	-18.21	-0 16.20	+ 9.14	-1.74	-13.80	17 17 2.36	50 44 23.4
17 17 22.7	8.2	18 4.28	17 50.9	11 4.20	-11.48	-0 16.19	+ 8.03	-1.74	-13.70	17 17 52.33	50 11 57.4
17 18 36.9	9.2	19 18.78	18 58.5	50 49.45	-16.91	-0 16.23	+ 9.28	-1.77	-13.80	17 19 6.44	51 32 8.3
17 20 51.4	7.5	21 34.12	21 13.8	50 35.45	-17.27	-0 16.21	+ 8.17	-1.79	-13.70	17 21 22.00	50 32 21.7
17 22 13.3	6.2	22 51.66	22 38.8	29 4.15	-10.42	-0 16.27	+11.58	-1.81	-13.85	17 22 38.89	52 54 3.6
17 23 45.1	9.0	24 25.84	24 9.6	17 40.05	-13.32	-0 16.24	+10.38	-1.81	-13.75	17 24 13.30	52 5 24.2
17 25 22.0	9.0	26 5.38	25 44.1	0 29.50	-18.18	-0 16.21	+ 8.02	-1.80	-13.60	17 25 53.23	50 22 28.3
17 26 3.5	8.0	26 46.34	26 31.2	42 52.50	-12.81	-0 16.21	+ 9.03	-1.80	-13.60	17 26 34.16	50 40 11.9
17 27 21.4	8.3	28 3.26	27 49.2	13 19.65	-12.09	-0 16.20	+ 8.61	-1.80	-13.50	17 27 51.20	50 9 45.6
17 28 39.3	8.8	29 20.88	29 6.3	54 19.40	-12.44	-0 16.21	+ 9.19	-1.82	-13.50	17 29 8.71	50 28 46.5
17 30 8.6	9.2	30 49.70	30 30.8	28 30.40	-15.95	-0 16.23	+ 9.34	-1.83	-13.50	17 30 37.40	50 54 32.7
17 33 21.4	8.3	34 3.86	33 43.4	11 24.40	-17.57	-0 16.21	+ 8.06	-1.84	-13.40	17 33 51.72	50 11 37.0
17 33 59.8	8.2	34 39.72	34 48.8	50 14.55	+ 7.74	-0 16.22	+ 8.18	-1.85	-13.40	17 34 27.48	50 33 12.5
17 37 25.8	9.0	38 8.06	37 46.0	19 23.35	-18.99	-0 16.21	+ 8.69	-1.86	-13.30	17 37 55.92	50 3 38.8
17 38 14.9	7.7	38 57.18	38 43.5	50 26.60	-11.65	-0 16.22	+ 8.21	-1.88	-13.30	17 38 44.90	50 32 42.7
17 39 22.8	9.0	40 4.54	39 41.9	5 17.20	-19.32	-0 16.21	+ 7.82	-1.88	-13.25	17 39 52.32	50 17 44.4
17 40 8.9	8.9	40 49.94	41 16.3	17 18.45	+22.66	-0 16.21	+ 8.12	-1.88	-13.25	17 40 37.76	50 6 25.8
17 41 22.1	7.2	42 2.62	41 42.4	17 22.00	-17.35	-0 16.21	+ 8.22	-1.89	-13.20	17 41 50.44	50 5 42.8
17 42 56.9	9.1	43 37.02	43 23.8	41 4.15	-11.19	-0 16.23	+ 8.56	-1.91	-13.20	17 43 24.65	50 42 7.7
17 45 9.3	9.1	45 51.16	45 33.1	8 51.75	-15.50	-0 16.22	+ 8.81	-1.91	-13.10	17 45 38.91	50 14 16.9
17 46 52.3	9.4	47 30.80	47 8.6	59 9.20	-18.54	-0 16.25	+10.01	-1.94	-13.15	17 47 18.21	51 23 58.1
17 47 45.3	9.5	48 26.20	48 37.5	8 46.25	+ 9.47	-0 16.24	+ 9.87	-1.94	-13.15	17 48 13.65	51 14 49.2
17 48 56.6	8.2	49 38.28	49 25.0	58 4.85	-11.35	-0 16.23	+ 8.78	-1.94	-13.00	17 49 25.94	50 25 9.3
17 52 22.9	9.5	53 5.22	52 44.7	25 16.70	-17.28	-0 16.24	+ 8.54	-1.97	-13.00	17 52 52.71	50 57 52.5
17 53 15.4	...	53 54.74	53 33.0	52 54.25	-18.08	-0 16.25	+ 9.80	-1.98	-13.00	17 53 42.07	51 30 15.7
17 55 47.6	8.8	56 28.36	56 9.5	10 4.35	-15.85	-0 16.25	+ 8.75	-1.99	-12.90	17 56 15.75	51 13 7.8
17 56 54.2	9.0	57 36.06	57 27.5	49 51.35	- 7.31	-0 16.24	+ 9.45	-1.99	-12.85	17 57 23.61	50 33 30.5
17 57 37.5	9.1	58 20.18	58 32.1	7 41.90	+ 9.97	-0 16.25	+ 9.60	-2.00	-12.80	17 58 7.56	51 15 58.0
17 59 34.9	8.4	0 18.14	59 58.6	19 30.25	-16.76	-0 16.23	+ 8.75	-1.99	-12.70	18 0 5.82	50 3 42.5
18 0 55.7	8.1	1 34.88	1 24.8	35 54.05	- 8.55	-0 16.24	+ 8.62	-2.01	-12.70	18 1 22.36	50 47 27.2
18 2 19.5	8.4	3 0.30	2 39.5	3 44.15	-17.78	-0 16.24	+ 8.83	-2.01	-12.65	18 2 47.88	50 19 28.7
18 3 19.7	8.8	4 1.42	3 37.4	56 9.05	-20.46	-0 16.24	+ 8.21	-2.02	-12.65	18 3 48.97	50 27 0.8
18 4 19.6	8.0	5 0.74	4 43.9	31 7.50	-14.19	-0 16.25	+ 8.71	-2.03	-12.70	18 4 48.18	50 52 9.4
18 6 9.8	7.9	6 50.44	6 35.4	0 42.80	-12.80	-0 16.25	+ 8.14	-2.03	-12.55	18 6 38.00	50 22 31.1
18 7 27.5	8.8	8 11.20	7 50.7	47 2.80	-17.42	-0 16.25	+ 8.64	-2.04	-12.50	18 7 58.69	50 36 12.1
18 8 33.3	9.0	9 14.04	8 52.2	15 5.25	-18.31	-0 16.26	+ 8.65	-2.06	-12.60	18 9 1.38	51 8 9.1
18 9 58.8	8.9	10 39.34	10 59.1	25 14.65	+16.69	-0 16.26	+ 8.49	-2.06	-12.50	18 10 26.72	50 58 35.1
18 11 53.9	7.8	12 33.76	12 20.3	27 34.05	-11.39	-0 16.26	+ 9.20	-2.07	-12.40	18 12 21.14	50 55 49.1
18 12 57.7	8.0	13 39.10	13 27.7	49 10.65	- 9.69	-0 16.25	+ 9.27	-2.07	-12.35	18 13 26.58	50 34 14.7
18 15 9.4	8.2	15 48.92	15 33.4	53 40.50	-12.92	-0 16.27	+10.08	-2.10	-12.35	18 15 36.13	51 29 43.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
18 16 33.7	6.5	17 13.12	16 57.4	5 46.40	-13.14	-0 16.27	+ 9.09	-2.10	-12.30	18 17 0.39	51 17 36.6
18 17 38.0	8.5	18 22.62	18 7.3	52 44.00	-13.02	-0 16.26	+ 8.78	-2.10	-12.20	18 18 10.08	50 30 39.3
18 18 40.3	8.8	19 21.92	19 5.1	25 24.35	-14.16	-0 16.27	+ 8.63	-2.11	-12.20	18 19 9.26	50 57 58.1
18 20 6.7	8.5	20 47.24	20 23.2	39 47.80	-20.34	-0 16.26	+ 9.50	-2.12	-12.15	18 20 34.63	50 43 29.8
18 21 19.1	8.3	22 0.88	21 38.3	59 19.30	-19.29	-0 16.26	+ 9.03	-2.11	-12.10	18 21 48.36	50 23 59.4
18 28 5.7	8.4	28 48.18	28 22.9	53 21.70	-21.54	-0 16.27	+ 8.84	-2.15	-11.90	18 28 35.61	50 29 57.1
18 30 0.8	9.5	30 41.20	30 19.2	38 50.50	-18.16	-0 16.29	+10.32	-2.18	-11.85	18 30 28.29	51 44 33.9
18 30 55.4	8.0	31 37.10	31 21.5	22 42.05	-13.05	-0 16.28	+ 9.29	-2.17	-11.80	18 31 24.39	51 0 46.8
18 32 48.9	9.2	33 31.62	33 4.6	42 29.65	-22.82	-0 16.27	+ 8.81	-2.18	-11.70	18 33 19.00	50 40 49.7
18 33 44.0	8.5	34 25.86	34 10.2	12 19.75	-13.37	-0 16.26	+ 8.35	-2.17	-11.65	18 34 13.37	50 11 8.9
18 37 3.9	8.5	37 46.36	37 23.3	41 39.70	-19.59	-0 16.27	+ 8.65	-2.19	-11.60	18 37 33.74	50 41 44.3
18 38 16.7	8.0	38 57.08	38 43.6	23 19.25	-11.37	-0 16.28	+ 9.47	-2.21	-11.55	18 38 44.37	51 0 14.2
18 39 41.8	8.2	40 23.86	40 9.5	54 56.85	-12.19	-0 16.28	+ 9.40	-2.20	-11.45	18 40 11.28	50 28 36.3
18 43 25.5	9.0	44 7.46	43 55.5	56 1.10	-10.14	-0 16.28	+ 8.28	-2.22	-11.35	18 43 54.89	50 27 34.4
18 45 20.5	9.0	46 2.24	45 36.2	42 50.80	-22.06	-0 16.28	+ 8.91	-2.23	-11.30	18 45 49.62	50 40 34.1
18 46 50.9	8.0	47 33.02	47 12.9	23 39.80	-16.93	-0 16.29	+ 9.51	-2.25	-11.25	18 47 20.30	50 59 51.4
18 47 55.8	8.5	48 36.76	49 2.8	29 17.75	+21.94	-0 16.29	+ 9.50	-2.25	-11.20	18 48 24.07	50 54 52.7
18 49 38.4	5.2	50 20.32	50 6.1	50 24.45	-12.07	-0 16.28	+ 8.22	-2.25	-11.15	18 50 7.73	50 33 11.4
18 50 41.0	9.3	51 24.32	50 59.5	57 50.05	-21.16	-0 16.28	+ 8.62	-2.25	-11.10	18 51 11.77	50 25 37.5
18 51 34.3	8.8	52 16.54	52 45.0	39 29.00	+24.14	-0 16.29	+ 9.37	-2.26	-11.05	18 52 3.90	50 44 44.9
18 54 8.3	8.5	54 50.16	54 26.9	30 5.15	-19.68	-0 16.30	+ 8.39	-2.28	-11.00	18 54 37.48	50 53 24.9
18 55 24.0	7.5	56 5.56	55 48.8	45 26.20	-14.27	-0 16.29	+ 8.26	-2.27	-10.95	18 55 52.96	50 38 9.6
18 56 34.7	6.0	57 17.52	57 4.2	2 13.90	-11.36	-0 16.29	+ 8.49	-2.27	-10.90	18 57 5.00	50 21 25.5
18 57 28.5	9.0	58 11.18	58 57.4	15 22.65	+38.80	-0 16.30	+ 9.15	-2.29	-10.85	18 57 58.45	51 9 7.9
18 59 10.0	8.3	59 52.64	0 16.4	55 21.80	+20.28	-0 16.29	+ 8.05	-2.29	-10.75	18 59 40.08	50 28 49.9
19 0 8.2	8.9	0 51.86	0 49.0	19 32.55	- 2.49	-0 16.28	+ 8.88	-2.28	-10.75	19 0 39.42	50 4 17.5
19 2 22.1	8.5	3 4.30	2 39.7	31 50.50	-20.34	-0 16.32	+ 9.83	-2.34	-10.70	19 2 51.37	51 51 43.4
19 3 34.5	8.5	4 16.66	3 56.7	55 59.75	-16.69	-0 16.31	+ 9.28	-2.33	-10.65	19 4 3.85	51 27 37.8
19 4 23.9	8.8	5 6.16	4 52.8	29 32.25	-11.07	-0 16.32	+10.77	-2.35	-10.60	19 4 53.23	51 54 12.7
19 6 23.2	8.9	7 5.84	7 3.2	11 58.05	- 2.27	-0 16.31	+ 9.38	-2.33	-10.50	19 6 53.12	51 11 55.1
19 7 23.8	8.7	8 6.64	7 51.2	38 27.85	-12.75	-0 16.32	+10.28	-2.35	-10.45	19 7 53.77	51 45 16.1
ZONE 103, AUGUST 5, 1871.											
17 27 10.8	4.0	27 49.90	27 23.8	59 18.30	-21.32	-0 16.99	+11.06	-1.79	-14.10	17 27 36.54	52 23 41.0
17 29 0.7	8.8	29 40.46	29 11.8	42 3.00	-23.29	-0 17.00	+10.88	-1.81	-14.05	17 29 26.99	52 40 54.8
17 31 43.8	8.8	32 24.74	31 53.4	18 23.95	-25.75	-0 16.98	+10.42	-1.81	-13.95	17 32 11.43	52 4 32.0
17 32 55.3	8.0	33 35.10	33 9.3	49 24.70	-20.99	-0 16.99	+11.27	-1.83	-13.95	17 33 21.63	52 33 37.2
17 34 58.1	9.1	35 39.02	35 10.2	42 24.60	-23.37	-0 17.00	+10.85	-1.84	-13.95	17 35 25.49	52 40 35.3
17 37 20.3	9.0	38 1.68	37 39.3	42 10.10	-18.59	-0 16.97	+ 9.85	-1.84	-13.80	17 37 48.42	51 40 54.5
17 38 57.0	8.2	39 36.72	39 11.2	16 19.85	-20.96	-0 16.98	+ 9.98	-1.86	-13.80	17 39 23.32	52 6 43.1
17 40 56.3	8.2	41 37.38	41 5.8	32 33.05	-26.13	-0 16.97	+ 9.96	-1.87	-13.70	17 41 24.05	51 50 25.5
17 41 51.6	8.8	42 32.52	42 12.6	23 17.50	-16.40	-0 16.98	+10.47	-1.88	-13.70	17 42 19.12	51 59 51.6
17 42 54.9	8.4	43 34.94	43 14.9	51 34.45	-16.29	-0 16.99	+10.52	-1.89	-13.70	17 43 21.39	52 31 35.2
17 44 50.1	9.4	45 31.50	44 58.3	45 12.75	-27.59	-0 16.97	+ 9.07	-1.89	-13.60	17 45 18.19	51 37 44.9
17 47 13.5	7.4	47 55.20	47 23.9	6 34.05	-26.21	-0 16.96	+ 9.14	-1.90	-13.50	17 47 41.97	51 16 26.0
17 48 10.7	9.6	48 52.72	48 41.9	19 8.95	- 9.09	-0 16.96	+ 9.81	-1.90	-13.50	17 48 39.54	51 4 9.2
17 50 13.9	8.7	50 53.62	50 29.6	58 35.25	-19.60	-0 16.99	+10.91	-1.94	-13.50	17 50 40.04	52 24 34.2
17 51 44.0	9.0	52 25.40	51 59.8	54 10.05	-21.34	-0 16.97	+10.13	-1.93	-13.45	17 52 12.08	51 28 57.4
17 53 28.8	9.2	54 9.30	53 39.7	57 46.05	-24.17	-0 16.99	+10.64	-1.96	-13.40	17 53 55.69	52 25 19.8
17 55 57.8	9.0	56 40.68	56 13.8	21 22.25	-22.16	-0 16.98	+ 9.91	-1.96	-13.35	17 56 27.18	52 1 45.8
17 57 10.2	7.9	57 48.64	57 19.9	31 48.90	-23.28	-0 17.00	+10.81	-1.99	-13.35	17 57 34.88	52 51 19.4
17 59 0.8	9.0	59 43.12	59 18.9	23 2.75	-19.94	-0 16.98	+10.35	-1.98	-13.30	17 59 29.60	52 0 9.1
17 59 59.1	8.7	0 39.12	0 16.2	31 57.65	-18.51	-0 17.00	+10.93	-2.00	-13.30	18 0 25.35	52 51 16.5

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
18 4 36.2	9.0	5 15.42	4 46.4	29 43.00	-23.43	-0 17.01	+11.63	-2.03	-13.20	18 5 1.60	52 53 28.7
18 5 34.0	8.8	6 13.18	5 49.5	12 22.40	-19.89	-0 16.96	+ 9.35	-2.01	-13.05	18 5 59.85	51 10 51.0
18 6 55.9	8.1	7 36.04	7 5.9	30 45.95	-24.88	-0 16.98	+ 9.53	-2.03	-13.05	18 7 22.51	51 52 23.1
18 8 22.9	9.3	9 5.68	8 39.2	52 1.10	-22.08	-0 16.97	+ 9.58	-2.03	-13.00	18 8 52.24	51 31 11.4
18 10 2.4	9.5	10 43.26	10 10.6	0 14.95	-26.72	-0 16.99	+ 9.85	-2.05	-13.00	18 10 29.58	52 22 53.8
18 11 27.4	7.8	12 6.14	11 36.8	52 7.95	-23.87	-0 16.99	+10.55	-2.06	-12.95	18 11 52.41	52 31 4.9
18 12 12.5	9.3	12 53.30	12 31.2	34 35.05	-17.88	-0 16.99	+11.61	-2.07	-12.95	18 12 39.49	52 48 45.0
18 13 40.4	8.5	14 21.74	13 53.8	21 2.65	-22.98	-0 16.98	+ 9.82	-2.07	-12.85	18 14 8.14	52 2 11.2
18 15 0.2	8.9	15 39.28	15 16.5	12 52.70	-18.72	-0 16.98	+10.55	-2.08	-12.85	18 15 25.64	52 10 26.6
18 16 6.2	6.8	16 46.04	16 19.5	47 24.70	-21.55	-0 17.00	+10.76	-2.09	-12.85	18 16 32.26	52 35 52.3
18 17 4.3	9.4	17 44.22	17 25.2	46 16.00	-15.44	-0 17.00	+10.56	-2.10	-12.80	18 17 30.43	52 37 7.4
18 18 5.9*	9.3	18 48.02	18 25.4	15 29.20	-18.49	-0 16.98	+ 9.84	-2.10	-12.75	18 18 34.38	52 7 50.8
18 18 52.6	8.7	19 33.42	19 15.3	13 48.10	-14.87	-0 16.98	+10.80	-2.10	-12.70	18 19 19.77	52 9 36.8
18 20 56.9	8.6	21 37.14	21 7.6	24 29.15	-23.77	-0 17.01	+11.68	-2.13	-12.70	18 21 23.22	52 58 48.4
18 26 39.4	9.4	27 20.48	27 1.3	51 10.80	-15.64	-0 16.99	+10.46	-2.15	-12.50	18 27 6.70	52 32 15.9
18 29 32.4	7.0	30 13.00	29 48.7	5 25.50	-19.89	-0 16.98	+ 9.95	-2.15	-12.40	18 29 59.29	52 17 57.5
18 30 37.0	8.8	31 17.64	30 44.7	7 57.95	-26.96	-0 16.98	+10.48	-2.17	-12.35	18 31 3.94	52 15 19.0
18 30 40.2	5.5	31 20.30	30 47.0	7 57.95	-27.29	-0 16.98	+10.47	-2.17	-12.35	18 31 6.60	52 15 18.6
18 31 54.9	9.2	32 34.82	32 15.0	33 37.90	-16.01	-0 17.00	+11.42	-2.18	-12.35	18 32 20.94	52 49 51.4
18 33 34.7	8.7	34 14.20	33 49.3	32 26.75	-20.13	-0 17.00	+11.05	-2.19	-12.30	18 34 0.32	52 50 58.6
18 35 28.3	8.8	36 9.12	35 40.1	46 38.75	-23.57	-0 17.00	+10.52	-2.20	-12.20	18 35 55.30	52 36 43.4
18 36 33.9	5.0	37 14.10	36 42.0	18 34.20	-26.33	-0 16.98	+10.49	-2.19	-12.15	18 37 0.44	52 4 45.6
18 38 13.2	9.0	38 54.64	38 29.9	54 59.65	-20.15	-0 16.99	+11.38	-2.21	-12.15	18 38 40.86	52 28 27.8
18 40 6.5	9.3	40 50.30	40 17.4	52 46.25	-27.42	-0 16.97	+ 9.68	-2.20	-12.00	18 40 36.80	51 30 33.0
18 41 3.9	8.8	41 46.64	41 23.5	58 17.25	-19.29	-0 16.97	+ 9.85	-2.20	-11.95	18 41 33.16	51 25 10.7
18 43 8.3	8.8	43 49.50	43 20.1	49 51.90	-24.47	-0 16.97	+10.34	-2.21	-11.90	18 43 35.99	51 23 32.1
18 44 52.9	8.8	45 35.42	45 8.5	50 51.45	-22.40	-0 16.97	+ 9.32	-2.22	-11.85	18 45 21.91	51 32 34.3
18 46 53.1	9.0	47 37.08	47 10.4	11 51.80	-22.41	-0 16.96	+ 9.24	-2.22	-11.75	18 47 23.68	51 11 34.6
18 47 51.6	9.1	48 32.90	48 12.6	14 14.15	-16.67	-0 16.98	+10.89	-2.25	-11.75	18 48 19.22	52 9 20.0
18 49 18.7	9.0	50 1.78	49 34.3	16 48.45	-22.61	-0 16.98	+10.11	-2.26	-11.70	18 49 48.12	52 6 39.5
18 51 10.6	7.3	51 52.06	51 19.3	50 56.30	-26.71	-0 16.99	+10.20	-2.27	-11.65	18 51 38.29	52 32 28.4
18 52 27.1	9.5	53 8.16	52 45.5	53 3.60	-18.50	-0 16.99	+10.91	-2.28	-11.60	18 52 54.39	52 30 30.4
ZONE 104, AUGUST 9, 1871.											
17 45 28.9	9.8	46 8.88	45 46.0	47 31.25	-19.37	-0 14.23	+ 8.95	-1.78	-14.25	17 45 58.66	50 35 33.0
17 49 33.6	9.0	50 13.80	50 23.0	14 54.60	-23.50	-0 14.22	+ 8.97	-1.81	-14.15	17 50 3.66	50 8 7.1
17 52 32.3	8.5	53 11.84	52 57.9	53 48.75	-11.84	-0 14.23	+ 9.22	-1.82	-14.15	17 53 1.59	50 29 25.9
17 54 30.3	8.3	55 8.70	54 49.0	3 5.55	-16.45	-0 14.23	+ 8.82	-1.84	-14.10	17 54 58.47	50 20 4.8
17 56 54.2	9.0	57 34.10	57 3.2	49 32.60	-26.27	-0 14.23	+ 9.25	-1.86	-14.05	17 57 23.79	50 33 29.3
18 1 5.1	9.0	1 45.30	1 15.1	31 8.55	-25.52	-0 14.26	+ 8.68	-1.89	-14.00	18 1 34.87	50 51 55.0
18 3 26.9	7.0	4 4.60	3 38.5	34 57.30	-22.08	-0 14.24	+ 9.71	-1.90	-13.95	18 3 54.19	50 48 11.6
18 7 37.6	8.2	8 17.96	7 56.7	37 17.25	-18.03	-0 14.24	+ 8.99	-1.92	-13.85	18 8 7.54	50 45 56.6
18 10 0.9	8.3	10 40.16	10 19.1	53 45.80	-17.97	-0 14.24	+ 9.13	-1.93	-13.80	18 10 29.80	50 29 29.1
18 12 49.3	8.3	13 31.48	13 4.7	11 44.90	-22.97	-0 14.24	+ 8.21	-1.95	-13.65	18 13 21.18	50 11 25.2
18 15 27.1	8.8	16 6.00	15 55.3	55 7.55	- 8.92	-0 14.27	+ 9.27	-1.98	-13.70	18 15 55.34	51 28 18.5
18 18 2.0	8.8	18 43.38	18 22.2	4 41.85	-18.12	-0 14.24	+ 9.19	-1.98	-13.55	18 18 33.02	50 18 36.0
18 21 30.3	8.8	22 12.24	21 44.9	54 59.45	-23.26	-0 14.24	+ 9.37	-2.00	-13.45	18 22 1.84	50 28 14.8
18 26 57.0	8.5	27 37.36	27 5.1	17 38.80	-27.74	-0 14.23	+ 8.25	-2.02	-13.30	18 27 27.05	50 5 31.8
18 30 29.0	9.0	31 8.82	30 41.4	31 7.05	-23.15	-0 14.27	+ 8.73	-2.06	-13.25	18 30 58.27	50 52 9.9
18 33 9.1	7.8	33 46.88	33 22.0	37 11.55	-20.63	-0 14.28	+10.01	-2.09	-13.20	18 33 36.08	51 46 10.2
18 35 44.8	8.5	36 25.26	35 59.8	14 53.00	-21.88	-0 14.24	+ 9.00	-2.07	-13.05	18 36 14.91	50 8 27.6
18 38 32.1	8.9	39 11.72	38 46.7	11 24.50	-21.42	-0 14.24	+ 8.14	-2.09	-13.00	18 39 1.35	50 11 56.7
18 41 28.2	9.3	42 7.46	41 43.3	30 43.60	-20.45	-0 14.27	+ 8.66	-2.12	-12.90	18 41 56.89	50 52 40.2

* 18 18 [34.38]

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
18 44 52.9	8.5	45 32.66	45 13.7	50 57.55	-15.82	-0 14.28	+ 9.48	-2.15	-12.85	18 45 21.91	51 32 32.9
18 47 7.8	9.0	47 48.12	47 26.8	56 26.10	-18.16	-0 14.25	+ 8.46	-2.14	-12.75	18 47 37.68	50 27 1.8
18 49 38.4	...	50 18.38	...	...	...	-0 14.26	...	-2.15	...	18 50 7.92	...
18 49 39.9	8.0	50 20.78	49 56.8	53 18.40	-20.44	-0 14.26	+ 9.05	-2.15	-12.65	18 50 10.32	50 30 8.8
18 52 12.4	...	52 53.33	52 36.2	0 0.20	-14.60	-0 14.26	+ 8.06	-2.16	-12.60	18 52 42.90	50 23 32.8
ZONE 105, AUGUST 10, 1871.											
17 45 28.9	10.0	46 9.06	46 26.1	48 6.80	+14.45	-0 14.53	+ 9.15	-1.76	-14.45	17 45 58.56	50 35 30.7
17 52 32.3	8.5	53 12.10	52 52.1	53 42.40	-17.04	-0 14.53	+ 9.17	-1.79	-14.30	17 53 1.58	50 29 26.3
17 54 30.3	8.0	55 8.90	54 52.7	3 6.70	-13.84	-0 14.53	+ 8.89	-1.81	-14.25	17 54 58.40	50 20 5.6
17 56 54.2	9.2	57 34.30	57 13.7	49 38.55	-17.52	-0 14.53	+ 9.47	-1.83	-14.25	17 57 23.72	50 33 31.5
18 1 5.1	9.0	1 45.61	1 25.3	31 16.40	-17.15	-0 14.54	+ 8.91	-1.86	-14.20	18 1 34.93	50 51 55.0
18 3 26.9	6.8	4 4.98	4 15.1	35 26.25	+ 8.55	-0 14.53	+ 8.68	-1.88	-14.15	18 3 54.30	50 48 11.5
18 7 37.6	8.3	8 18.30	7 58.1	37 17.00	-17.10	-0 14.54	+ 9.08	-1.90	-14.05	18 8 7.60	50 45 57.1
18 10 0.9	8.5	10 40.40	10 21.1	53 45.75	-16.44	-0 14.53	+ 9.19	-1.91	-13.95	18 10 29.77	50 29 30.0
18 18 2.0	8.8	18 43.70	18 25.0	4 41.15	-15.99	-0 14.52	+ 9.25	-1.96	-13.75	18 18 33.08	50 18 38.2
18 21 30.3	9.0	22 12.46	21 50.6	55 3.10	-18.79	-0 14.53	+ 8.15	-1.98	-13.70	18 22 1.79	50 28 13.6
18 24 0.0	9.0	24 43.58	24 25.3	2 24.15	-15.63	-0 14.53	+ 8.70	-1.99	-13.60	18 24 32.93	50 20 57.2
18 27 1.2	9.2	27 42.44	27 20.3	20 40.55	-19.00	-0 14.52	+ 7.87	-2.01	-13.55	18 27 31.85	50 2 37.6
18 30 29.0	8.8	31 9.04	30 52.9	31 15.45	-13.60	-0 14.54	+ 8.93	-2.04	-13.45	18 30 58.24	50 52 10.5
18 33 9.1	7.9	33 47.22	33 26.9	37 12.60	-16.82	-0 14.56	+ 10.12	-2.07	-13.45	18 33 36.16	51 46 12.3
18 35 44.8	8.8	36 25.54	36 11.9	15 0.75	-11.67	-0 14.52	+ 7.86	-2.06	-13.30	18 36 14.92	50 8 28.1
18 38 32.1	9.0	39 11.96	38 48.7	11 24.00	-19.96	-0 14.52	+ 8.21	-2.07	-13.20	18 39 1.33	50 11 58.0
18 41 28.2	9.0	42 7.84	41 56.0	30 53.85	- 9.97	-0 14.54	+ 8.87	-2.10	-13.20	18 41 57.02	50 52 39.8
18 44 52.9	8.9	45 33.00	45 13.0	50 54.95	-16.66	-0 14.56	+ 9.52	-2.13	-13.10	18 45 21.99	51 32 33.9
18 47 7.8	9.0	47 48.40	47 34.5	56 29.75	-11.85	-0 14.53	+ 8.59	-2.12	-13.00	18 47 37.70	50 27 3.8
18 49 39.9	7.5	50 21.06	50 3.6	53 23.80	-14.90	-0 14.53	+ 9.12	-2.14	-12.90	18 50 10.34	50 30 8.2
18 52 12.4	9.0	52 53.54	52 43.2	0 4.45	- 8.79	-0 14.53	+ 8.17	-2.15	-12.85	18 52 42.85	50 23 33.7
18 55 8.1	8.7	55 47.14	55 34.2	23 14.20	-10.63	-0 14.57	+ 10.67	-2.19	-12.80	18 55 36.02	52 0 25.6
18 57 41.0	9.0	58 21.00	58 11.4	21 16.90	- 8.08	-0 14.54	+ 9.17	-2.19	-12.70	18 58 10.16	51 2 25.0
19 0 28.6	9.2	1 8.90	0 49.3	44 52.80	-16.29	-0 14.56	+ 10.72	-2.22	-12.60	19 0 57.89	51 38 43.4
19 3 51.4	8.8	4 32.46	4 20.0	55 28.50	-10.65	-0 14.53	+ 8.34	-2.21	-12.45	19 4 21.78	50 28 12.3
19 6 20.0	9.0	7 1.66	7 11.9	10 35.70	+ 8.74	-0 14.52	+ 8.10	-2.22	-12.40	19 6 51.06	50 13 25.1
ZONE 106, AUGUST 11, 1871.											
17 49 39.5	9.4	50 19.06	50 30.7	5 16.50	+ 9.92	-0 14.64	+ 8.16	-1.76	-14.50	17 50 8.51	50 18 16.6
17 52 51.4	9.1	53 32.42	53 18.1	37 7.75	-12.11	-0 14.65	+ 9.11	-1.79	-14.50	17 53 21.72	50 46 5.4
17 56 21.5	8.9	57 1.14	56 42.3	43 52.60	-15.95	-0 14.65	+ 9.14	-1.81	-14.40	17 56 50.45	50 39 18.0
17 58 39.8	9.0	59 18.24	59 3.5	13 2.90	-12.34	-0 14.67	+ 9.74	-1.83	-14.75	17 59 7.38	51 10 12.4
18 1 26.5	8.7	2 4.30	1 48.7	30 47.30	-12.89	-0 14.69	+ 9.91	-1.86	-14.40	18 1 53.23	51 52 28.9
18 7 42.9	7.5	8 19.92	7 54.8	40 34.35	-20.82	-0 14.68	+ 9.58	-1.89	-14.30	18 8 8.87	51 42 35.9
18 9 52.4	9.3	10 31.04	10 15.0	37 12.20	-13.26	-0 14.68	+ 10.19	-1.91	-14.25	18 10 19.96	51 46 7.0
18 12 32.2	8.0	13 12.00	12 47.1	53 50.90	-21.22	-0 14.65	+ 10.14	-1.91	-14.10	18 13 1.25	50 29 21.4
18 15 40.8	8.6	16 19.20	16 6.2	42 54.05	-13.58	-0 14.68	+ 10.23	-1.94	-14.10	18 16 8.12	51 40 27.1
18 19 1.7	9.0	19 42.06	19 23.9	57 56.45	-15.52	-0 14.65	+ 8.88	-1.94	-13.95	18 19 31.31	50 25 22.7
18 27 1.2	9.1	27 42.46	27 28.3	20 46.75	-12.21	-0 14.64	+ 7.99	-1.99	-13.70	18 27 31.79	50 2 37.9
18 30 0.8	8.9	30 39.52	30 34.9	39 3.10	- 3.81	-0 14.68	+ 10.71	-2.03	-13.75	18 30 28.36	51 44 33.6
18 35 44.8	8.8	36 25.64	36 13.0	15 1.75	-10.81	-0 14.64	+ 9.22	-2.03	-13.55	18 36 14.93	50 8 28.7
19 5 20.8	8.8	6 0.38	6 10.9	28 16.85	+ 8.67	-0 14.70	+ 10.66	-2.23	-12.75	19 5 49.19	51 55 45.3
19 17 53.3	9.5	18 34.90	18 46.4	57 7.90	+ 9.60	-0 14.69	+ 9.87	-2.28	-12.25	19 18 23.89	51 26 59.1

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
19 31 24.8	...	32 6.46	31 44.8	19 54.00	-18.26	-0 14.68	+10.07	-2.33	-11.80	19 31 55.65	51 3 50.2
19 36 4.2	8.2	36 45.72	36 25.8	38 20.10	-16.49	-0 14.69	+10.42	-2.36	-11.60	19 36 34.77	51 45 28.0
19 42 7.4	8.8	42 49.70	42 30.1	7 38.40	-16.42	-0 14.68	+ 9.71	-2.38	-11.40	19 42 38.92	51 16 11.1
ZONE 107, AUGUST 13, 1871.											
17 32 55.3	8.4	33 33.08	33 12.7	49 27.60	-16.60	-0 15.20	+11.67	-1.62	-15.30	17 33 21.61	52 33 36.0
17 34 58.1	8.9	35 37.04	35 5.9	42 20.15	-25.24	-0 15.20	+11.10	-1.63	-15.30	17 35 25.52	52 40 35.0
17 37 20.3	8.7	37 59.54	37 25.0	41 58.30	-28.63	-0 15.16	+ 9.89	-1.64	-15.20	17 37 48.29	51 40 53.1
17 38 57.0	7.8	39 34.64	39 6.9	16 14.30	-22.77	-0 15.17	+10.24	-1.66	-15.20	17 39 23.25	52 6 43.9
17 40 56.3	8.2	41 35.28	41 8.9	32 33.65	-21.83	-0 15.16	+10.34	-1.67	-15.15	17 41 23.96	51 50 26.3
17 41 51.6	8.5	42 30.36	42 10.9	23 15.95	-16.07	-0 15.17	+10.77	-1.68	-15.15	17 42 18.97	51 59 50.5
17 42 54.9	7.8	43 32.96	43 6.6	51 27.70	-21.50	-0 15.19	+10.78	-1.69	-15.15	17 43 21.41	52 31 33.7
17 44 50.1	9.2	45 29.46	45 2.8	45 16.05	-22.19	-0 15.16	+ 9.49	-1.69	-15.05	17 45 18.16	51 37 44.2
17 47 13.5	7.0	47 53.16	47 28.5	6 37.00	-20.68	-0 15.15	+ 9.51	-1.71	-15.00	17 47 41.93	51 16 25.6
17 48 10.7	9.2	48 50.72	48 43.2	19 9.70	- 6.31	-0 15.15	+10.05	-1.71	-14.95	17 48 39.54	51 4 8.2
17 50 13.9	8.0	50 51.62	50 24.7	58 28.95	-21.96	-0 15.19	+11.15	-1.74	-15.05	17 50 40.04	52 24 35.0
17 51 44.0	8.9	52 23.52	51 56.7	54 5.15	-22.34	-0 15.16	+10.35	-1.74	-14.95	17 52 12.20	51 28 58.3
17 53 28.8	8.5	54 7.18	53 39.5	57 45.20	-22.54	-0 15.19	+10.98	-1.76	-15.00	17 53 55.57	52 25 19.2
17 54 25.5	9.2	55 4.34	54 42.3	1 42.85	-17.98	-0 15.19	+10.72	-1.77	-15.00	17 54 52.74	52 21 26.2
17 55 57.8	9.1	56 38.50	56 11.1	21 19.75	-22.57	-0 15.17	+10.19	-1.77	-14.90	17 56 27.00	52 1 44.8
17 57 10.2	9.0	57 46.54	57 20.6	31 48.90	-20.94	-0 15.19	+11.19	-1.79	-14.95	17 57 34.79	52 51 18.7
17 59 0.8	8.8	59 41.06	59 15.4	22 57.85	-21.18	-0 15.17	+10.62	-1.79	-14.85	17 59 29.54	52 0 9.6
17 59 59.1	8.2	0 37.04	0 30.1	32 6.45	- 5.58	-0 15.19	+11.48	-1.81	-14.90	18 0 25.27	52 51 17.8
18 2 21.1	8.2	2 58.70	2 32.7	23 15.20	-21.43	-0 15.17	+10.72	-1.81	-14.80	18 2 47.16	51 59 53.4
18 4 36.2	8.7	5 13.34	4 44.2	29 40.00	-23.51	-0 15.20	+11.99	-1.84	-14.80	18 5 1.52	52 53 28.6
18 5 34.0	8.9	6 11.14	5 50.5	12 21.90	-17.20	-0 15.15	+ 9.63	-1.83	-14.70	18 5 59.80	51 10 51.1
18 6 55.9	7.8	7 34.08	7 9.9	30 48.20	-20.00	-0 15.17	+ 9.95	-1.84	-14.70	18 7 22.55	51 52 22.7
18 8 22.9	8.8	9 3.56	8 37.7	51 58.25	-21.58	-0 15.16	+ 9.82	-1.85	-14.65	18 8 52.11	51 31 11.5
18 10 2.4	9.2	10 41.22	10 16.0	0 19.35	-20.59	-0 15.19	+10.33	-1.87	-14.65	18 10 29.52	52 22 52.5
18 11 27.4	7.5	12 4.16	11 40.9	52 10.10	-18.98	-0 15.19	+11.01	-1.88	-14.65	18 11 52.41	52 31 4.6
18 12 12.5	9.1	12 51.20	12 44.6	34 45.35	- 5.34	-0 15.19	+12.11	-1.89	-14.65	18 12 39.37	52 48 43.3
18 13 40.4	8.8	14 19.76	13 55.4	21 2.85	-20.10	-0 15.17	+10.17	-1.89	-14.60	18 14 8.15	52 2 10.6
18 15 0.2	8.6	15 37.18	15 13.0	12 49.20	-19.87	-0 15.17	+10.79	-1.90	-14.55	18 15 25.53	52 10 25.7
18 16 6.2	6.8	16 44.02	16 22.2	47 26.25	-17.73	-0 15.19	+11.16	-1.91	-14.55	18 16 32.23	52 35 51.5
18 17 4.3	8.9	17 42.10	17 16.2	46 7.85	-21.05	-0 15.19	+10.77	-1.92	-14.55	18 17 30.30	52 37 6.6
18 18 5.9	8.9	18 45.04	18 29.9	15 32.15	-12.41	-0 15.17	+10.24	-1.92	-14.50	18 18 33.39	52 7 50.8
18 18 52.6	8.8	19 31.40	19 11.5	13 44.00	-16.35	-0 15.17	+11.05	-1.93	-14.45	18 19 19.73	52 9 36.1
18 29 32.4	8.2	30 11.02	29 45.7	5 22.85	-19.89	-0 15.18	+10.29	-1.99	-14.25	18 29 59.27	52 17 56.8
18 30 37.0	9.2	31 15.60	30 51.1	8 1.60	-20.08	-0 15.18	+10.92	-2.00	-14.25	18 31 3.87	52 15 18.9
18 30 40.2	5.0	31 18.32	30 52.4	8 1.60	-21.23	-0 15.18	+10.90	-2.00	-14.25	18 31 6.59	52 15 17.8
18 31 54.9	9.1	32 32.90	32 7.6	33 29.30	-20.46	-0 15.19	+11.65	-2.02	-14.20	18 32 20.99	52 49 52.1
18 33 34.7	8.9	34 12.26	33 48.4	32 25.60	-19.32	-0 15.19	+11.39	-2.03	-14.20	18 34 0.35	52 50 57.2
18 35 28.3	9.0	36 7.08	35 40.7	46 37.65	-21.46	-0 15.19	+10.93	-2.04	-14.15	18 35 55.23	52 36 43.3
18 36 33.9	6.0	37 12.22	36 55.8	18 45.40	-13.49	-0 15.17	+11.02	-2.03	-14.10	18 37 0.53	52 4 44.0
18 38 13.2	9.1	38 52.68	38 36.3	55 3.75	-13.38	-0 15.19	+10.49	-2.05	-14.05	18 38 40.86	52 28 25.9
18 40 6.5	9.4	40 48.40	40 25.6	52 51.80	-19.00	-0 15.16	+10.09	-2.04	-13.90	18 40 36.87	51 30 32.6
18 41 3.9	8.9	41 44.70	41 37.0	58 28.25	- 6.43	-0 15.16	+10.26	-2.05	-13.90	18 41 33.18	51 25 9.2
18 43 8.3	9.0	43 47.46	43 24.1	49 52.20	-19.48	-0 15.16	+10.68	-2.05	-13.85	18 43 35.92	51 33 33.4
18 44 52.9	8.3	45 33.40	45 11.4	50 52.75	-18.32	-0 15.16	+ 9.64	-2.07	-13.80	18 45 21.85	51 32 33.6
18 46 53.1	8.7	47 35.02	47 9.2	11 50.80	-21.65	-0 15.15	+ 9.44	-2.08	-13.75	18 47 23.57	51 11 32.8
18 47 51.6	9.0	48 30.92	48 13.0	14 13.40	-14.70	-0 15.17	+11.21	-2.10	-13.75	18 48 19.20	52 9 19.3
18 49 18.7	9.0	49 59.76	49 33.3	16 47.05	-21.79	-0 15.17	+10.45	-2.11	-13.75	18 49 48.06	52 6 38.2
18 51 10.6	7.8	51 50.20	51 18.8	50 55.05	-25.57	-0 15.19	+10.59	-2.12	-13.70	18 51 38.38	52 32 27.3

ZONE 108, AUGUST 17, 1871.

R. A. 1855.o. According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.o.	Mean Dec. 1875.o.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
17 45 37.1	7.0	46 17.32	45 56.6	34 24.05	-17.51	-0 16.12	+ 9.68	-1.58	-15.60	17 46 5.36	50 48 41.4
17 49 39.5	...	50 20.48	50 9.4	4 59.70	- 9.49	-0 16.10	+ 9.39	-1.61	-15.55	17 50 8.62	50 18 14.9
18 2 13.3	9.0	2 52.06	2 35.0	27 18.50	-14.11	-0 16.16	+10.44	-1.71	-15.50	18 2 39.65	51 55 57.0
18 7 42.9	7.7	8 21.24	7 55.5	40 32.65	-21.32	-0 16.14	+ 9.58	-1.75	-15.40	18 8 8.87	51 42 36.8
18 9 52.4	9.2	10 32.48	10 16.0	37 13.00	-13.67	-0 16.14	+10.23	-1.76	-15.40	18 10 20.09	51 46 5.5
18 12 32.2	8.0	13 13.44	12 54.9	53 54.55	-15.75	-0 16.12	+10.24	-1.77	-15.25	18 13 1.36	50 29 23.0
18 15 40.8	9.2	16 20.50	16 6.4	42 53.40	-11.70	-0 16.14	+10.33	-1.80	-15.30	18 16 8.10	51 40 29.3
18 19 1.7	9.0	19 43.36	19 29.4	57 59.20	-11.94	-0 16.12	+ 8.96	-1.81	-15.15	18 19 31.27	50 25 23.2
18 30 31.0	8.8	31 10.90	30 48.2	45 22.80	-18.86	-0 16.14	+ 9.52	-1.90	-15.00	18 30 58.46	51 37 57.4
18 36 28.0	9.0	37 9.64	36 51.2	17 36.90	-15.80	-0 16.12	+ 8.51	-1.91	-14.80	18 36 57.59	50 5 47.6
18 40 8.8	9.5	40 50.00	40 28.5	6 42.95	-18.00	-0 16.14	+ 9.52	-1.95	-14.80	18 40 37.63	51 16 13.4
18 46 53.5	9.5	47 35.84	47 16.3	48 26.00	-16.58	-0 16.13	+ 9.24	-1.97	-14.70	18 47 23.66	50 35 2.1
18 50 41.0	9.2	51 24.42	50 58.2	57 57.90	- 9.35	-0 16.13	+ 8.83	-2.00	-14.50	18 51 12.27	50 25 38.6
18 50 46.9	8.8	51 29.34	51 12.3	57 56.79	-26.52	-0 16.13	+ 8.90	-2.00	-14.50	18 51 17.19	50 25 22.6
18 53 32.1	8.5	54 13.38	53 48.9	3 13.40	-20.49	-0 16.14	+ 9.91	-2.03	-14.50	18 54 1.00	51 20 14.0
19 4 23.9	8.5	5 5.98	4 53.5	29 31.45	-10.32	-0 16.18	+11.01	-2.11	-14.20	19 4 53.43	51 54 11.4
19 10 29.7	9.0	11 12.06	10 54.7	13 2.35	-14.27	-0 16.15	+ 9.76	-2.13	-14.00	19 10 59.74	51 10 37.3
19 13 22.9	8.8	14 5.30	13 38.4	22 56.65	-22.16	-0 16.18	+10.59	-2.17	-14.00	19 13 52.74	52 0 36.9
19 15 23.6	9.2	16 7.00	15 55.6	3 29.10	- 9.54	-0 16.16	+10.14	-2.16	-13.90	19 15 54.65	51 20 17.4
19 17 53.3	9.5	18 36.14	18 17.4	56 40.75	-15.60	-0 16.16	+ 9.73	-2.17	-13.80	19 18 23.77	51 27 0.2
19 22 59.6	8.9	23 43.28	23 28.7	13 44.70	-12.25	-0 16.15	+ 9.99	-2.20	-13.70	19 23 31.01	51 10 1.6
19 26 2.9	4.5	26 45.66	26 16.3	55 44.30	-24.52	-0 16.16	+ 9.34	-2.22	-13.60	19 26 33.32	51 27 50.2
19 29 27.9	9.3	30 11.22	29 48.7	55 30.40	-18.77	-0 16.16	+ 9.40	-2.24	-13.50	19 29 58.90	51 28 11.1
19 31 24.8	8.5	32 7.84	31 46.0	19 52.15	-18.34	-0 16.16	+10.09	-2.24	-13.40	19 31 55.64	51 3 51.2
19 33 34.9	8.0	34 17.58	33 59.4	22 49.25	-14.99	-0 16.18	+10.65	-2.27	-13.35	19 34 5.14	52 0 58.8
19 36 1.3	8.5	36 45.16	36 30.2	44 56.15	-12.46	-0 16.17	+10.82	-2.25	-13.30	19 36 32.86	51 38 55.4
19 38 20.1	9.0	39 3.74	38 42.3	40 25.85	-17.76	-0 16.19	+ 9.93	-2.29	-13.20	19 38 51.39	51 42 20.3
19 42 7.4	8.8	42 51.12	42 30.2	7 36.85	-17.51	-0 16.16	+ 9.74	-2.30	-13.05	19 42 38.94	51 16 10.8
19 44 24.0	9.0	45 7.08	44 46.8	35 33.45	-16.81	-0 16.16	+ 9.83	-2.32	-13.00	19 44 54.79	51 48 15.7
19 47 27.0	9.0	48 4.06	47 32.1	45 30.25	-26.59	-0 16.16	+ 9.46	-2.33	-12.90	19 47 51.83	51 38 12.8
19 47 27.0	8.9	48 12.06	47 51.4	45 30.25	-17.20	-0 16.16	+ 9.61	-2.33	-12.90	19 47 59.83	51 38 22.4
19 50 34.9	8.8	51 20.52	50 58.9	52 49.90	-18.41	-0 16.16	+10.06	-2.34	-12.75	19 51 8.36	51 31 0.1

ZONE 109, AUGUST 18, 1871.

18 2 43.4	9.0	3 21.56	3 8.0	26 51.10	-10.74	-0 16.45	+12.38	-1.71	-15.80	18 3 8.35	53 56 29.4
18 3 58.4	9.1	4 35.54	4 20.4	42 15.20	-11.97	-0 16.43	+12.22	-1.71	-15.80	18 4 22.42	53 41 4.3
18 5 57.6	9.0	6 36.40	6 11.4	11 36.75	-19.91	-0 16.42	+11.45	-1.72	-15.70	18 6 23.40	53 11 34.9
18 7 38.2	8.8	8 17.86	7 54.5	7 32.00	-18.74	-0 16.42	+11.75	-1.74	-15.70	18 8 4.83	53 15 41.7
18 8 29.7	8.8	9 7.84	8 51.0	56 7.05	-13.39	-0 16.43	+11.66	-1.74	-15.70	18 8 54.75	53 27 12.2
18 9 41.4	8.5	10 18.26	9 56.4	51 52.05	-17.43	-0 16.43	+11.87	-1.75	-15.70	18 10 5.14	53 31 23.8
18 10 42.9	9.1	11 22.62	11 0.1	53 21.90	-17.92	-0 16.43	+12.22	-1.76	-15.70	18 11 9.50	53 29 54.2
18 11 41.6	8.8	12 18.62	11 59.6	46 24.35	-15.09	-0 16.43	+11.88	-1.77	-15.65	18 12 5.46	53 36 54.6
18 12 56.2	7.5	13 33.72	13 8.3	8 11.70	-20.35	-0 16.42	+11.89	-1.77	-15.65	18 13 20.67	53 15 2.4
18 14 36.4	8.7	15 14.86	14 48.3	41 34.30	-21.08	-0 16.43	+11.93	-1.79	-15.65	18 15 1.66	53 41 39.7
18 15 46.9	8.0	16 24.56	15 58.6	50 28.15	-20.19	-0 16.46	+12.56	-1.81	-15.65	18 16 11.09	54 32 47.8
18 17 5.1	8.4	17 42.88	17 21.9	52 42.70	-16.32	-0 16.46	+13.27	-1.82	-15.65	18 17 29.41	54 30 38.1
18 18 20.1	8.0	18 58.78	19 18.8	26 13.35	+15.75	-0 16.44	+12.18	-1.82	-15.55	18 18 45.48	53 57 39.2
18 20 17.8	8.9	21 0.96	20 29.6	40 46.55	-24.89	-0 16.42	+11.68	-1.83	-15.50	18 20 47.74	53 42 25.6
18 22 1.0	9.5	22 38.46	22 18.7	35 38.10	-15.28	-0 16.45	+12.97	-1.86	-15.55	18 22 24.89	54 47 45.5
18 22 48.6	8.5	23 28.76	23 14.3	0 22.10	-11.58	-0 16.42	+11.47	-1.84	-15.45	18 23 15.62	53 23 4.1

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
18 24 38.4	7.2	25 16.92	24 56.0	31 6.25	-16.50	-0 16.43	+12.09	-1.86	-15.45	18 25 3.64	53 52 16.2
18 28 42.3	8.7	29 20.18	28 59.6	41 25.50	-15.94	-0 16.45	+13.07	-1.91	-15.40	18 29 6.62	54 41 59.9
18 30 9.8	8.8	30 46.10	30 17.3	30 38.80	-22.19	-0 16.46	+12.95	-1.92	-15.40	18 30 32.47	54 52 40.8
18 31 59.5	8.0	32 37.70	32 16.9	17 7.50	-16.33	-0 16.44	+12.55	-1.92	-15.30	18 32 24.31	54 6 18.3
18 32 58.5	8.8	33 36.24	33 14.2	39 20.80	-17.01	-0 16.45	+13.80	-1.93	-15.30	18 33 22.66	54 44 5.9
18 34 17.8	8.0	34 56.72	34 35.1	18 47.40	-17.38	-0 16.41	+11.95	-1.92	-15.25	18 34 43.64	53 4 37.6
18 35 15.0	8.0	35 53.66	35 34.5	37 10.15	-15.19	-0 16.42	+12.29	-1.93	-15.25	18 35 40.39	53 46 17.7
18 36 45.9	8.2	37 25.36	37 1.3	10 53.45	-19.33	-0 16.41	+11.31	-1.94	-15.20	18 37 12.25	53 12 29.9
18 37 26.9	8.4	38 6.20	37 55.0	28 18.90	-8.83	-0 16.44	+12.75	-1.95	-15.20	18 37 52.86	53 55 16.6
18 38 49.6	8.8	39 28.38	39 15.8	7 4.15	-10.09	-0 16.41	+11.80	-1.95	-15.15	18 39 15.24	53 16 29.7
18 40 9.3	8.0	40 48.30	40 22.6	4 32.50	-20.55	-0 16.41	+12.29	-1.96	-15.10	18 40 35.15	53 18 51.8
18 43 39.7	9.2	44 19.84	43 58.8	51 36.60	-16.71	-0 16.42	+11.82	-1.99	-15.00	18 44 6.62	53 31 52.4
18 44 39.2	9.0	45 18.80	45 3.0	31 33.95	-12.47	-0 16.44	+12.22	-2.00	-15.00	18 45 5.46	53 52 0.0
18 46 33.7	9.2	47 13.54	46 55.2	4 59.86	-14.70	-0 16.41	+11.08	-2.00	-14.95	18 47 0.39	53 18 31.5
18 48 3.1	8.9	48 42.90	48 21.0	27 26.95	-17.26	-0 16.44	+12.44	-2.02	-14.95	18 48 29.55	53 56 3.7
18 50 19.3	9.0	50 59.68	50 37.5	56 29.00	-17.70	-0 16.42	+11.74	-2.03	-14.85	18 50 46.49	53 27 1.4
18 51 33.8	8.7	52 11.98	51 47.8	27 29.15	-18.61	-0 16.46	+13.56	-2.07	-14.90	18 51 58.32	54 56 2.5
18 52 25.8	8.8	53 6.06	52 48.1	53 39.70	-13.99	-0 16.45	+13.43	-2.06	-14.85	18 52 52.53	54 29 56.8
18 53 24.2	9.0	54 5.72	53 49.4	29 39.85	-12.86	-0 16.44	+13.04	-2.06	-14.80	18 53 52.38	53 53 57.8
18 55 7.3	9.2	55 47.18	55 29.5	2 35.15	-14.14	-0 16.42	+11.96	-2.06	-14.75	18 55 34.02	53 21 0.7
18 56 19.5	8.0	56 58.84	56 50.5	44 2.90	-6.43	-0 16.45	+13.77	-2.09	-14.80	18 56 45.27	54 39 42.9
18 57 35.7	8.6	58 15.02	57 54.2	49 12.10	-16.54	-0 16.42	+12.58	-2.08	-14.70	18 58 1.80	53 34 22.9
18 59 52.9	8.7	0 32.36	0 3.2	47 27.35	-23.20	-0 16.42	+12.05	-2.09	-14.65	19 0 19.14	53 36 1.3
19 1 40.7	8.9	2 18.66	1 56.2	13 48.25	-18.06	-0 16.41	+12.01	-2.10	-14.60	19 2 5.57	53 9 46.1
19 2 41.7	9.0	3 24.56	3 5.2	15 33.15	-15.58	-0 16.41	+11.20	-2.10	-14.55	19 3 11.48	53 8 3.3
19 3 57.2	8.6	4 36.96	4 9.9	44 32.60	-21.50	-0 16.42	+12.65	-2.12	-14.55	19 4 23.72	53 38 59.8
19 5 3.7	8.8	5 43.44	5 18.2	29 57.25	-19.88	-0 16.44	+13.03	-2.13	-14.50	19 5 30.12	53 53 37.6
19 6 9.3	8.7	6 48.16	6 27.8	46 54.10	-16.21	-0 16.42	+12.03	-2.13	-14.45	19 6 34.94	53 36 43.8
19 7 29.6	9.2	8 11.10	7 49.9	49 49.55	-16.86	-0 16.42	+12.68	-2.14	-14.45	19 7 57.90	53 33 48.8
19 9 9.9	9.0	9 48.84	9 25.9	39 27.50	-18.14	-0 16.42	+12.77	-2.15	-14.40	19 9 35.60	53 44 10.3
19 13 4.3	9.0	13 44.96	13 20.3	1 42.30	-19.74	-0 16.42	+11.66	-2.17	-14.30	19 13 31.84	53 21 54.2
19 14 23.6	8.0	15 3.42	14 39.7	28 19.30	-18.69	-0 16.43	+12.64	-2.19	-14.25	19 14 50.14	53 55 19.7
19 15 20.7	8.0	16 1.02	15 38.5	39 24.25	-17.82	-0 16.42	+12.77	-2.19	-14.25	19 15 47.80	53 44 16.1
19 16 34.2	8.2	17 15.08	16 55.0	15 57.00	-16.15	-0 16.41	+11.30	-2.18	-14.15	19 17 2.05	53 7 44.0
19 18 37.2	8.9	19 16.98	18 56.5	44 51.40	-16.27	-0 16.42	+12.81	-2.21	-14.10	19 19 3.80	53 38 51.7
19 19 33.7	9.1	20 14.62	19 59.5	52 21.80	-12.02	-0 16.42	+12.08	-2.21	-14.10	19 20 1.48	53 31 25.2
19 20 42.6	9.0	21 23.82	21 0.8	51 22.95	-18.31	-0 16.42	+11.80	-2.22	-14.05	19 21 10.68	53 32 17.9
19 21 53.9	8.5	22 33.44	22 11.4	52 30.95	-17.51	-0 16.42	+12.04	-2.22	-14.00	19 22 20.32	53 31 11.4
19 22 53.6	7.9	23 33.50	23 8.9	45 38.25	-19.07	-0 16.45	+12.77	-2.26	-14.00	19 23 20.04	54 38 3.6
19 23 39.9	8.8	24 18.80	24 47.9	22 24.05	+22.25	-0 16.46	+13.61	-2.27	-14.00	19 24 5.22	55 2 0.2
19 24 57.8	7.6	25 38.04	25 14.8	52 23.95	-18.03	-0 16.45	+13.11	-2.27	-13.95	19 25 24.62	54 31 20.0
ZONE 110, AUGUST 19, 1871.											
18 2 43.4	9.0	3 21.68	3 8.3	26 50.50	-10.56	-0 16.67	+12.54	-1.68	-16.00	18 3 8.28	53 56 31.0
18 3 58.4	8.8	4 35.84	4 20.7	42 15.55	-11.97	-0 16.66	+12.38	-1.68	-15.95	18 4 22.52	53 41 4.8
18 5 57.6	8.8	6 36.58	6 20.9	11 46.15	-12.50	-0 16.65	+11.75	-1.69	-15.90	18 6 23.38	53 11 33.8
18 7 38.2	8.5	8 17.84	7 52.1	7 30.35	-20.58	-0 16.65	+11.88	-1.71	-15.90	18 8 4.61	53 15 42.2
18 8 29.7	9.0	9 7.70	8 53.9	56 12.55	-10.92	-0 16.66	+11.88	-1.72	-15.90	18 8 54.80	53 27 10.0
18 9 41.4	8.0	10 18.36	9 56.1	51 54.85	-17.75	-0 16.66	+12.03	-1.72	-15.90	18 10 5.04	53 31 21.5
18 10 42.9	9.2	11 23.00	11 2.9	53 22.55	-16.01	-0 16.66	+12.41	-1.73	-15.90	18 11 9.68	53 29 56.2
18 11 41.6	8.5	12 18.84	11 52.3	46 20.65	-21.05	-0 16.66	+11.95	-1.74	-15.85	18 12 5.48	53 36 53.0
18 12 56.2	7.8	13 33.92	13 12.6	8 17.70	-17.06	-0 16.65	+12.13	-1.75	-15.80	18 13 20.66	53 15 0.6
18 14 36.4	8.2	15 15.06	14 55.2	41 40.75	-15.77	-0 16.66	+12.20	-1.76	-15.80	18 15 1.66	53 41 39.4

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
18 15 46.9	8.0	16 24.68	16 5.4	50 34.35	-14.98	-0 16.69	+12.86	-1.78	-15.85	18 16 11.01	54 32 47.7
18 16 35.0	8.5	17 12.18	16 53.9	49 8.35	-14.20	-0 16.69	+13.80	-1.79	-15.80	18 16 58.51	54 34 15.7
18 18 20.1	8.2	18 58.87	19 5.3	26 2.65	+ 5.04	-0 16.67	+12.40	-1.79	-15.75	18 18 45.37	53 57 40.0
18 20 17.8	8.9	21 1.06	20 32.7	40 51.10	-22.43	-0 16.66	+11.89	-1.80	-15.70	18 20 47.63	53 42 24.3
18 22 1.0	9.1	22 38.58	22 14.5	35 35.30	-18.52	-0 16.69	+13.13	-1.83	-15.70	18 22 24.80	54 47 45.8
18 22 48.6	8.8	23 28.84	23 11.6	0 21.05	-13.73	-0 16.66	+11.59	-1.82	-15.65	18 23 15.48	53 23 3.7
18 24 38.4	7.5	25 17.18	24 58.1	31 9.05	-15.08	-0 16.67	+12.28	-1.84	-15.65	18 25 3.68	53 52 15.6
18 25 58.1	9.1	26 36.74	26 26.0	28 43.65	- 8.44	-0 16.67	+13.05	-1.85	-15.60	18 26 23.21	53 54 48.9
18 28 42.3	8.3	29 20.30	28 55.2	41 22.50	-19.42	-0 16.69	+13.21	-1.88	-15.60	18 29 6.53	54 42 0.2
18 30 9.8	8.3	30 46.30	30 24.1	30 44.00	-17.10	-0 16.70	+13.28	-1.89	-15.60	18 30 32.46	54 52 41.6
18 31 59.5	8.5	32 37.86	32 22.7	17 12.35	-11.93	-0 16.67	+12.82	-1.89	-15.50	18 32 24.27	54 6 18.7
18 32 58.5	8.8	33 36.32	33 20.0	39 25.00	-12.60	-0 16.69	+14.11	-1.91	-15.50	18 33 22.52	54 44 7.0
18 34 17.8	8.5	34 56.72	34 38.0	18 50.05	-15.04	-0 16.65	+12.14	-1.89	-15.40	18 34 43.43	53 4 38.1
18 35 15.0	8.0	35 53.72	35 34.4	37 10.35	-15.27	-0 16.66	+12.46	-1.91	-15.45	18 35 40.23	53 46 18.2
18 36 45.9	8.0	37 25.48	37 3.3	10 55.10	-17.80	-0 16.65	+11.47	-1.91	-15.35	18 37 12.16	53 12 30.6
18 37 26.9	8.8	38 6.24	38 10.0	28 30.15	+ 3.00	-0 16.67	+13.01	-1.93	-15.40	18 37 52.69	53 55 18.0
18 38 49.6	8.8	39 28.50	39 13.8	7 2.85	-11.77	-0 16.65	+11.94	-1.93	-15.35	18 39 15.14	53 16 30.0
18 40 9.3	8.3	40 48.42	40 29.1	4 37.75	-15.44	-0 16.65	+12.56	-1.94	-15.30	18 40 35.05	53 18 52.6
18 43 39.7	7.0	44 19.94	43 57.7	51 35.20	-17.66	-0 16.66	+12.00	-1.96	-15.25	18 44 6.51	53 31 53.6
18 44 39.2	9.1	45 18.96	44 56.8	31 31.05	-17.53	-0 16.67	+12.33	-1.97	-15.25	18 45 5.42	53 51 58.5
18 48 3.1	9.0	48 42.94	49 5.6	28 2.95	+17.88	-0 16.67	+12.56	-2.00	-15.15	18 48 29.38	53 56 3.6
18 50 19.3	9.2	50 59.64	50 27.4	56 19.65	-25.67	-0 16.66	+11.73	-2.00	-15.10	18 50 46.24	53 27 3.3
18 51 33.8	8.7	52 12.28	51 46.4	27 29.50	-19.92	-0 16.70	+13.75	-2.04	-15.10	18 51 58.41	54 56 1.6
18 52 25.8	9.0	53 6.40	52 46.9	53 38.60	-15.16	-0 16.69	+13.63	-2.04	-15.10	18 52 52.65	54 29 57.5
18 53 24.2	9.2	54 5.92	53 45.6	29 37.80	-16.01	-0 16.67	+13.20	-2.03	-15.05	18 53 52.38	53 53 57.4
18 56 19.5	8.0	56 58.92	56 41.0	43 56.15	-15.44	-0 16.70	+14.14	-2.07	-15.00	18 56 45.12	54 39 41.6
18 57 35.7	8.8	58 15.10	57 54.1	49 13.40	-16.70	-0 16.67	+12.74	-2.05	-14.90	18 58 1.66	53 34 22.2
18 59 52.9	8.4	0 32.58	0 2.8	47 27.85	-23.67	-0 16.67	+12.21	-2.07	-14.85	19 0 19.13	53 36 1.0
19 1 40.7	8.9	2 18.92	1 55.2	13 47.25	-19.03	-0 16.66	+12.17	-2.07	-14.80	19 2 5.61	53 9 46.9
19 2 41.7	8.8	3 24.70	3 5.9	15 32.50	-15.10	-0 16.66	+11.37	-2.08	-14.75	19 3 11.39	53 8 5.2
19 3 57.2	8.7	4 37.12	4 15.8	44 38.45	-16.90	-0 16.67	+12.91	-2.09	-14.75	19 4 23.66	53 38 59.4
19 5 3.7	8.5	5 43.68	5 27.8	30 3.55	-12.55	-0 16.68	+12.09	-2.11	-14.75	19 5 30.14	53 53 38.2
19 7 29.6	9.0	8 11.10	7 46.3	49 46.05	-19.65	-0 16.67	+12.81	-2.12	-14.70	19 7 57.67	53 33 50.2
19 9 9.9	8.9	9 49.08	9 27.1	39 28.15	-17.42	-0 16.67	+12.95	-2.13	-14.65	19 9 35.61	53 44 11.1
19 10 8.2	9.0	10 46.42	10 34.0	39 0.05	- 9.82	-0 16.67	+12.94	-2.14	-14.60	19 10 32.95	53 44 47.1
19 13 4.3	9.1	13 45.28	13 17.9	1 39.65	-21.90	-0 16.67	+11.79	-2.15	-14.50	19 13 31.93	53 21 55.4
19 14 23.6	8.5	15 3.70	14 45.4	28 24.35	-14.43	-0 16.68	+12.93	-2.17	-14.45	19 14 50.19	53 55 19.8
19 15 20.7	7.8	16 1.06	15 50.1	39 34.40	- 8.71	-0 16.67	+13.09	-2.17	-14.45	19 15 47.61	53 44 15.9
19 16 34.2	8.0	17 15.26	16 52.8	15 56.45	-18.08	-0 16.66	+11.45	-2.16	-14.40	19 17 2.00	53 7 43.3
19 18 37.2	8.7	19 17.18	18 56.9	44 51.45	-16.11	-0 16.67	+12.99	-2.19	-14.35	19 19 3.77	53 38 52.6
19 19 33.7	9.2	20 15.00	20 4.4	52 28.95	- 8.44	-0 16.67	+12.32	-2.19	-14.30	19 20 1.63	53 31 22.4
19 20 42.6	8.9	21 24.02	21 13.9	51 33.65	- 9.63	-0 16.67	+12.09	-2.20	-14.30	19 21 10.65	53 32 16.7
19 21 53.9	8.3	22 33.64	22 9.3	52 31.15	-19.34	-0 16.67	+12.20	-2.20	-14.25	19 22 20.29	53 31 10.0
19 22 53.6	8.0	23 33.66	23 14.6	45 43.75	-14.82	-0 16.70	+13.06	-2.24	-14.25	19 23 19.97	54 38 3.1
19 23 39.9	9.0	24 18.76	24 8.8	21 52.03	- 9.13	-0 16.71	+12.87	-2.25	-14.25	19 24 4.95	55 2 0.6
19 24 57.8	8.0	25 38.34	25 19.1	52 29.15	-14.92	-0 16.70	+13.38	-2.25	-14.20	19 25 24.69	54 31 18.7
ZONE 111, AUGUST 22, 1871.											
18 1 5.1	9.0	1 42.78	1 26.0	41 10.90	-13.00	-0 17.29	+13.34	-1.58	-16.50	18 1 28.65	54 42 10.3
18 2 4.0	8.8	2 43.24	2 20.9	18 23.75	-17.51	-0 17.27	+13.14	-1.58	-16.45	18 2 29.29	54 4 53.2
18 4 12.4	9.2	4 51.66	4 29.2	54 27.90	-17.50	-0 17.29	+13.85	-1.60	-16.45	18 4 37.57	54 28 50.4
18 4 59.8	8.7	5 38.36	5 22.4	14 29.45	-12.55	-0 17.27	+13.52	-1.63	-16.45	18 5 24.35	54 8 53.8
18 7 33.9	6.5	8 11.84	7 46.0	8 18.00	-20.17	-0 17.27	+13.25	-1.63	-16.40	18 7 57.80	54 14 58.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	° "	"	m s	"	s	"	h m s	° ' "
18 8 54.2	9.0	9 35.46	9 10.8	53 34.35	-19.59	-0 17.26	+12.53	-1.63	-16.35	18 9 21.64	53 29 42.4
18 9 49.4	8.8	10 27.08	10 14.1	39 26.65	-10.05	-0 17.29	+14.21	-1.65	-16.45	18 10 12.87	54 44 1.5
18 10 44.2	8.7	11 24.00	11 10.5	44 31.80	-10.71	-0 17.26	+13.02	-1.65	-16.35	18 11 10.13	53 38 54.9
18 12 19.3	7.0	12 57.00	12 27.8	17 9.45	-22.92	-0 17.27	+12.73	-1.66	-16.35	18 12 42.98	54 6 5.3
18 14 8.9	8.9	14 47.42	14 21.5	40 40.75	-20.03	-0 17.29	+13.12	-1.68	-16.40	18 14 33.20	54 42 37.9
18 15 0.6	8.8	15 39.08	15 23.1	8 58.90	-12.44	-0 17.27	+13.52	-1.68	-16.30	18 15 25.01	54 14 28.1
18 17 5.1	8.8	17 43.66	17 19.1	52 42.60	-19.12	-0 17.29	+13.40	-1.70	-16.35	18 17 29.48	54 30 38.3
18 18 49.9	8.7	19 28.42	18 57.1	26 3.15	-24.06	-0 17.30	+13.41	-1.72	-16.35	18 19 14.09	54 57 13.4
18 20 7.2	8.3	20 46.32	20 15.6	21 12.50	-24.14	-0 17.27	+12.40	-1.72	-16.25	18 20 32.28	54 2 3.5
18 21 0.4	9.2	21 38.02	21 25.3	43 31.30	-9.83	-0 17.29	+13.87	-1.73	-16.30	18 21 23.78	54 40 0.8
18 22 1.0	9.5	22 39.16	22 29.4	35 48.80	-7.57	-0 17.29	+13.18	-1.74	-16.30	18 22 24.92	54 47 45.4
18 24 6.9	7.3	24 44.90	24 11.1	34 56.55	-26.07	-0 17.29	+12.90	-1.76	-16.25	18 24 30.60	54 48 19.4
18 25 9.7	8.8	25 48.72	25 25.0	25 43.70	-18.21	-0 17.30	+13.44	-1.77	-16.25	18 25 34.36	54 57 41.0
18 27 17.7	9.2	27 57.54	27 28.9	45 32.45	-22.16	-0 17.29	+12.93	-1.78	-16.20	18 27 43.28	54 37 48.6
18 32 2.8	8.9	32 44.80	32 19.6	16 30.40	-21.18	-0 17.20	+9.37	-1.78	-15.90	18 32 31.54	51 6 50.1
18 33 24.3	8.0	34 2.12	33 35.8	33 20.55	-20.28	-0 17.30	+13.91	-1.83	-16.10	18 33 47.77	54 50 5.6
18 35 33.7	8.0	36 13.94	35 43.3	9 26.85	-25.09	-0 17.22	+11.29	-1.81	-15.90	18 36 0.38	52 13 52.8
18 36 17.5	7.8	36 57.98	36 42.8	33 55.80	-12.30	-0 17.23	+11.98	-1.82	-15.95	18 36 44.26	52 49 37.6
18 37 37.5	8.5	38 15.34	37 49.2	12 37.60	-21.23	-0 17.28	+12.98	-1.85	-16.00	18 38 1.19	54 10 48.2
18 40 54.0	8.7	41 33.44	41 20.5	14 45.15	-10.36	-0 17.25	+12.56	-1.86	-15.90	18 41 19.60	53 8 52.4
18 41 59.2	6.0	42 38.44	42 15.6	37 37.60	-17.61	-0 17.29	+13.68	-1.89	-15.95	18 42 24.11	54 45 54.1
18 43 25.6	9.2	44 5.00	43 37.7	15 3.00	-21.41	-0 17.27	+12.29	-1.89	-15.90	18 43 50.86	54 8 24.1
18 44 25.0	8.7	45 6.92	44 50.4	7 52.50	-13.21	-0 17.23	+12.21	-1.89	-15.85	18 44 53.06	53 15 43.2
18 45 54.4	9.0	46 34.22	46 9.0	52 8.50	-20.53	-0 17.21	+11.10	-1.88	-15.75	18 46 20.58	52 31 19.3
18 46 33.3	8.5	47 12.74	47 4.1	4 11.00	-6.71	-0 17.26	+13.49	-1.91	-15.80	18 46 58.57	54 19 33.1
18 47 18.9	7.0	47 58.42	47 46.5	14 29.50	-9.33	-0 17.25	+13.52	-1.92	-15.80	18 47 44.29	54 9 12.3
18 48 28.8	8.8	49 9.02	48 42.7	26 18.20	-20.22	-0 17.27	+13.53	-1.94	-15.80	18 48 54.65	54 57 13.1
18 49 54.8	8.8	50 33.52	50 3.1	39 37.80	-23.65	-0 17.26	+14.02	-1.94	-15.80	18 50 19.23	54 43 51.1
18 50 4.8	8.4	50 43.83	50 24.5	39 37.80	-14.92	-0 17.26	+14.17	-1.94	-15.80	18 50 29.54	54 44 0.0
18 51 34.0	8.9	52 15.78	51 55.2	23 9.50	-16.60	-0 17.22	+11.92	-1.93	-15.70	18 52 1.99	53 0 25.0
18 52 55.7	8.8	53 37.70	53 9.5	20 0.50	-22.16	-0 17.24	+13.39	-1.96	-15.70	18 53 23.61	54 3 30.4
18 53 54.5	8.7	54 33.66	54 8.5	3 42.35	-19.67	-0 17.25	+13.41	-1.97	-15.70	18 54 19.48	54 19 51.4
18 54 29.6	8.9	55 12.68	54 0.7	42 30.25	-9.29	-0 17.26	+13.68	-1.98	-15.70	18 54 58.38	54 41 14.3
18 55 41.7	8.3	56 21.20	55 56.9	41 48.05	-18.81	-0 17.26	+13.39	-1.98	-15.65	18 56 6.92	54 41 47.2
18 57 1.6	8.5	57 41.56	57 15.1	54 52.00	-20.62	-0 17.26	+13.90	-1.98	-15.60	18 57 27.35	54 28 42.4
19 0 48.8	8.0	1 29.08	0 56.9	11 23.65	-25.22	-0 17.25	+12.60	-2.01	-15.55	19 1 14.96	54 12 6.2
19 1 52.4	8.9	2 33.28	2 12.4	39 53.70	-16.95	-0 17.20	+12.04	-2.03	-15.45	19 2 19.57	52 43 44.3
19 3 58.4	8.3	4 38.96	4 15.3	12 4.30	-18.57	-0 17.25	+12.89	-2.03	-15.45	19 4 24.85	54 11 33.7
19 5 17.3	8.9	5 58.02	5 37.3	45 1.10	-16.04	-0 17.26	+14.16	-2.05	-15.45	19 5 43.77	54 38 41.1
19 7 8.8	8.8	7 48.24	7 23.5	44 32.55	-19.13	-0 17.26	+13.99	-2.06	-15.40	19 7 34.00	54 39 7.0
19 8 1.5	9.3	8 40.80	8 25.3	31 51.15	-12.22	-0 17.27	+13.70	-2.07	-15.40	19 8 26.48	54 51 55.3
19 9 50.6	8.8	10 29.98	9 59.7	25 49.25	-23.30	-0 17.30	+13.36	-2.09	-15.60	19 10 15.61	54 57 46.2
19 10 40.3	9.2	11 20.42	11 10.2	34 8.85	-7.87	-0 17.29	+14.27	-2.09	-15.55	19 11 6.10	54 49 43.3
19 11 59.5	9.0	12 40.30	12 17.5	3 55.50	-17.80	-0 17.25	+13.49	-2.09	-15.25	19 12 26.16	54 19 46.7
19 14 6.4	8.5	14 46.94	14 19.1	19 32.05	-21.84	-0 17.24	+13.27	-2.10	-15.20	19 14 32.90	54 4 6.6
19 16 24.1	6.6	17 5.04	16 35.2	15 1.00	-23.37	-0 17.24	+13.48	-2.11	-15.15	19 16 50.99	54 8 37.2
19 17 47.8	8.8	18 28.24	18 0.1	20 35.95	-22.09	-0 17.23	+12.29	-2.12	-15.10	19 18 14.23	54 3 2.8
19 19 51.6	7.0	20 30.98	20 4.3	34 10.35	-20.60	-0 17.25	+14.11	-2.15	-15.10	19 20 16.74	54 49 32.4
19 21 37.3	8.5	22 19.14	21 58.2	12 43.75	-16.38	-0 17.24	+13.09	-2.15	-15.00	19 22 5.10	54 11 2.9
19 23 35.6	8.8	24 19.50	23 56.0	50 54.80	-19.14	-0 17.19	+10.86	-2.13	-14.90	19 24 5.95	52 32 47.6
19 24 23.3	...	25 6.14	24 52.6	50 33.45	-10.99	-0 17.19	+10.85	-2.13	-14.90	19 24 52.60	52 33 17.4
19 25 42.7	9.5	26 23.98	26 2.5	11 26.30	-16.83	-0 17.23	+12.76	-2.17	-14.90	19 26 9.97	54 12 21.0
19 27 28.0	8.9	28 9.32	27 45.7	12 38.60	-18.50	-0 17.23	+13.02	-2.19	-14.85	19 27 55.32	54 11 7.9
19 28 18.5	6.8	28 59.02	28 43.2	24 19.90	-12.14	-0 17.26	+14.45	-2.21	-14.85	19 28 44.77	54 59 34.7
19 29 18.5	9.0	29 59.98	29 45.4	7 4.60	-11.42	-0 17.24	+13.10	-2.20	-14.80	19 29 45.96	54 16 49.7
19 30 57.0	8.7	31 37.72	31 11.8	13 38.50	-20.31	-0 17.23	+13.19	-2.21	-14.75	19 31 23.74	54 10 7.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
19 31 39.9	9.1	32 23.46	32 9.9	7 18.90	-11.14	-0 17.18	+11.00	-2.17	-14.75	19 32 10.04	52 16 34.4
19 33 20.5	8.5	34 1.60	33 45.8	40 13.95	-12.22	-0 17.25	+13.09	-2.23	-14.70	19 33 47.47	54 43 41.0
19 34 17.9	7.5	34 58.84	34 37.7	43 23.15	-16.34	-0 17.25	+13.79	-2.24	-14.70	19 34 44.73	54 40 28.6
19 35 13.5	9.4	35 55.16	35 45.9	0 43.95	-7.27	-0 17.25	+12.89	-2.24	-14.65	19 35 41.13	54 23 16.4
19 36 47.8	8.5	37 29.14	37 9.7	24 49.00	-14.91	-0 17.26	+14.55	-2.26	-14.60	19 37 14.96	54 59 5.9
ZONE 112, AUGUST 28, 1871.											
18 1 5.1	9.0	1 44.06	1 24.6	41 9.55	-15.08	-0 18.66	+13.07	-1.39	-17.30	18 1 28.75	54 42 7.3
18 2 4.0	8.7	2 44.52	2 18.5	18 18.00	-20.42	-0 18.65	+12.76	-1.39	-17.30	18 2 29.38	54 4 53.6
18 4 12.4	9.0	4 52.88	4 27.0	54 22.00	-20.14	-0 18.66	+13.46	-1.41	-17.30	18 4 37.61	54 28 51.3
18 4 59.8	8.7	5 39.42	5 28.5	14 33.05	-8.55	-0 18.65	+13.25	-1.44	-17.25	18 5 24.22	54 8 51.9
18 7 33.9	7.2	8 13.02	7 57.4	8 24.50	-12.20	-0 18.65	+13.07	-1.44	-17.30	18 7 57.79	54 14 57.5
18 8 54.2	9.3	9 36.42	9 20.1	53 40.75	-12.98	-0 18.63	+12.29	-1.45	-17.20	18 9 21.41	53 29 40.3
18 9 49.4	8.7	10 28.22	10 20.7	39 28.70	-5.80	-0 18.66	+13.91	-1.46	-17.30	18 10 12.83	54 44 1.3
18 10 44.2	8.5	11 25.04	11 1.8	44 25.80	-18.41	-0 18.63	+12.55	-1.46	-17.20	18 11 9.99	53 38 50.7
18 12 19.3	8.0	12 58.14	12 37.4	17 14.45	-16.25	-0 18.65	+12.60	-1.48	-17.25	18 12 42.92	54 6 4.8
18 14 8.9	8.7	14 48.52	14 24.9	40 40.95	-18.25	-0 18.66	+12.91	-1.49	-17.30	18 14 33.12	54 42 37.2
18 15 0.6	9.0	15 40.08	15 30.5	9 1.70	-7.43	-0 18.65	+13.23	-1.50	-17.25	18 15 24.81	54 14 27.9
18 17 5.1	8.0	17 44.78	17 26.0	52 44.85	-14.61	-0 18.66	+13.17	-1.51	-17.25	18 17 29.42	54 30 38.2
18 18 49.9	8.8	19 29.52	19 11.8	26 11.60	-13.61	-0 18.68	+13.37	-1.54	-17.25	18 19 13.99	54 57 13.3
18 20 7.2	8.1	20 47.35	20 31.0	21 21.90	-12.88	-0 18.65	+12.36	-1.54	-17.20	18 20 32.11	54 2 3.2
18 21 0.4	9.1	21 39.10	21 34.0	43 37.50	-3.95	-0 18.66	+13.63	-1.55	-17.20	18 21 23.67	54 39 58.1
18 22 31.1	8.2	23 11.04	22 55.3	46 17.75	-12.17	-0 18.66	+13.04	-1.56	-17.20	18 22 55.62	54 37 9.6
18 24 6.9	9.5	24 46.00	24 38.8	35 16.40	-5.56	-0 18.66	+13.07	-1.57	-17.20	18 24 30.52	54 48 18.1
18 25 9.7	9.1	25 49.84	25 41.2	25 52.65	-6.61	-0 18.68	+13.37	-1.58	-17.20	18 25 34.29	54 57 41.4
18 27 17.7	9.3	27 58.46	27 43.5	45 41.95	-11.55	-0 18.66	+12.92	-1.60	-17.15	18 27 43.01	54 37 47.6
18 32 2.8	8.2	32 45.92	32 29.4	16 35.95	-13.87	-0 18.57	+9.32	-1.61	-16.95	18 32 31.46	51 6 49.6
18 33 24.3	8.1	34 3.18	33 42.3	33 23.90	-16.12	-0 18.68	+13.71	-1.65	-17.15	18 33 47.63	54 50 4.0
18 35 33.7	8.0	36 14.96	35 58.4	9 35.60	-13.61	-0 18.58	+11.14	-1.64	-16.95	18 36 0.21	52 13 53.2
18 36 17.5	8.0	36 58.96	36 56.6	34 4.00	-1.94	-0 18.60	+11.74	-1.64	-17.00	18 36 44.05	52 49 37.3
18 37 37.5	8.7	38 16.14	37 59.9	12 43.50	-13.87	-0 18.65	+12.86	-1.67	-17.05	18 38 0.80	54 10 47.3
18 40 54.0	8.5	41 34.60	41 22.7	14 45.20	-9.55	-0 18.62	+12.17	-1.69	-17.00	18 41 19.56	53 8 50.5
18 41 59.2	7.5	42 39.48	42 29.0	37 42.30	-8.11	-0 18.66	+13.51	-1.71	-17.05	18 42 23.96	54 45 56.5
19 9 50.6	8.5	10 31.04	10 17.7	26 1.40	-10.22	-0 18.68	+13.38	-1.93	-16.60	19 10 15.45	54 57 45.0
19 10 40.3	9.0	11 21.40	11 11.0	34 5.15	-8.02	-0 18.66	+13.93	-1.94	-16.60	19 11 5.86	54 49 44.3
19 11 59.5	8.8	12 41.32	12 22.9	3 56.65	-14.37	-0 18.65	+13.23	-1.94	-16.55	19 12 25.93	54 19 46.2
19 14 6.4	8.4	14 48.04	14 36.9	19 43.85	-8.72	-0 18.65	+13.19	-1.95	-16.50	19 14 32.74	54 4 5.4
19 16 24.1	7.5	17 6.08	16 50.7	15 9.05	-12.08	-0 18.65	+12.25	-1.97	-16.45	19 16 50.76	54 8 36.7
19 17 47.8	8.7	18 29.40	18 17.0	20 46.55	-9.75	-0 18.65	+12.33	-1.97	-16.40	19 18 14.12	54 3 2.1
19 19 51.6	7.5	20 32.24	20 19.3	34 19.00	-9.95	-0 18.66	+13.89	-2.00	-16.40	19 20 16.74	54 49 31.7
19 21 37.3	8.5	22 20.34	22 3.7	12 45.55	-13.01	-0 18.64	+12.88	-2.01	-16.35	19 22 5.04	54 11 1.8
19 23 35.6	8.5	24 20.70	23 58.6	50 55.20	-18.00	-0 18.59	+10.62	-1.99	-16.25	19 24 5.89	52 32 45.6
19 24 23.3	8.8	25 7.28	24 52.9	50 30.40	-11.72	-0 18.59	+10.62	-2.00	-16.25	19 24 52.47	52 33 16.9
19 25 42.7	9.3	26 24.88	26 3.7	11 25.00	-16.60	-0 18.64	+12.54	-2.03	-16.30	19 26 9.60	54 12 19.7
19 27 28.0	8.8	28 10.32	27 50.5	12 39.30	-15.60	-0 18.64	+12.81	-2.05	-16.25	19 27 55.05	54 11 7.3
19 28 18.5	7.5	29 0.24	28 49.0	24 19.45	-8.60	-0 18.67	+14.10	-2.07	-16.20	19 28 44.72	54 59 35.8
19 29 18.5	9.2	30 0.92	29 49.6	7 5.10	-8.84	-0 18.64	+12.88	-2.06	-16.20	19 29 45.64	54 16 49.0
19 30 57.0	8.3	31 38.62	31 25.7	13 44.45	-10.11	-0 18.64	+13.06	-2.07	-16.15	19 31 23.37	54 10 9.1
19 31 39.9	8.8	32 24.72	32 9.1	7 15.65	-12.78	-0 18.58	+10.72	-2.04	-16.10	19 32 10.03	52 16 33.2
19 33 20.5	8.0	34 2.58	33 45.5	40 8.60	-13.22	-0 18.65	+12.82	-2.09	-16.10	19 33 47.19	54 43 42.5
19 34 17.9	7.5	34 59.96	34 35.2	43 19.00	-19.20	-0 18.65	+13.38	-2.10	-16.10	19 34 44.59	54 40 26.9
19 36 47.8	8.5	37 30.24	37 13.6	24 45.80	-12.76	-0 18.67	+14.12	-2.12	-16.00	19 37 14.79	54 59 8.2

ZONE 113, AUGUST 31, 1871.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	s	"	"	h m s	° ' "
18 23 37.9	8.5	24 20.54	23 58.0	23 3.75	-18.13	-0 19.79	+11.52	-1.47	-17.55	18 24 4.51	53 0 16.6
18 25 14.9	8.6	25 59.00	25 33.2	1 24.15	-21.09	-0 19.77	+10.44	-1.48	-17.50	18 25 43.15	52 21 52.8
18 26 39.4	9.5	27 22.54	26 57.5	51 4.95	-20.36	-0 19.77	+10.59	-1.49	-17.50	18 27 6.64	52 32 13.4
18 28 5.1	8.3	28 48.26	28 23.0	2 6.75	-20.69	-0 19.77	+10.60	-1.49	-17.50	18 28 32.41	52 21 11.8
18 28 52.9	6.8	29 35.60	29 16.7	22 4.65	-15.57	-0 19.76	+10.32	-1.51	-17.45	18 29 19.82	52 1 19.0
18 30 20.7	8.4	31 2.76	30 32.7	35 46.85	-24.37	-0 19.77	+10.71	-1.52	-17.50	18 30 46.78	52 47 28.9
18 33 57.2	8.0	34 39.12	34 11.8	41 2.30	-21.12	-0 19.84	+12.87	-1.55	-17.60	18 34 22.55	54 42 20.0
18 36 26.9	8.8	37 11.56	36 43.3	24 33.45	-23.85	-0 19.73	+ 9.24	-1.56	-17.35	18 36 56.04	50 58 43.6
18 37 26.9	8.8	38 9.28	37 44.8	28 8.45	-19.32	-0 19.83	+12.55	-1.58	-17.55	18 37 52.92	53 55 16.6
18 38 22.6	9.0	39 4.14	38 42.3	40 32.85	-17.27	-0 19.81	+11.79	-1.59	-17.55	18 38 47.85	53 42 53.8
18 39 32.7	8.7	40 14.64	39 44.7	46 46.40	-23.75	-0 19.81	+11.79	-1.59	-17.50	18 39 58.38	53 36 34.2
18 40 24.3	6.0	41 5.70	40 39.8	38 45.05	-20.51	-0 19.81	+12.43	-1.60	-17.50	18 40 49.40	53 44 39.7
18 41 52.2	9.0	42 34.96	42 8.2	35 11.40	-21.69	-0 19.77	+10.65	-1.61	-17.45	18 42 18.94	52 48 11.0
18 43 26.5	8.8	44 10.84	43 43.4	57 1.90	-22.36	-0 19.77	+10.64	-1.62	-17.40	18 43 54.91	52 26 20.4
18 44 39.2	8.8	45 21.82	44 58.4	21 28.40	-18.84	-0 19.80	+11.19	-1.64	-17.45	18 45 5.69	53 51 58.3
18 45 54.4	9.0	46 36.42	46 10.5	52 6.00	-21.10	-0 19.77	+10.77	-1.63	-17.40	18 46 20.47	52 31 18.6
18 47 28.5	8.7	48 10.96	47 43.7	41 23.70	-22.15	-0 19.77	+10.79	-1.65	-17.40	18 47 54.96	52 42 0.3
18 47 45.4	8.9	48 29.98	48 0.3	41 23.70	-24.09	-0 19.77	+10.76	-1.65	-17.40	18 48 13.98	52 41 58.5
18 48 39.2	8.0	49 21.74	49 1.6	28 39.45	-16.23	-0 19.78	+11.57	-1.66	-17.40	18 49 5.67	52 54 51.7
18 49 18.7	8.7	50 4.12	49 44.1	16 53.55	-16.45	-0 19.76	+10.39	-1.66	-17.40	18 49 48.28	52 6 36.4
18 51 34.0	8.8	52 17.92	51 54.0	23 3.95	-19.26	-0 19.80	+11.51	-1.68	-17.40	18 52 1.81	53 0 25.1
18 52 37.2	9.3	53 19.30	53 2.8	9 6.10	-12.91	-0 19.83	+13.17	-1.70	-17.45	18 53 2.83	54 14 31.3
18 53 54.5	9.0	54 35.98	54 9.7	3 39.05	-20.53	-0 19.83	+13.04	-1.71	-17.40	18 54 19.48	54 19 51.0
18 54 45.9	8.8	55 30.80	55 6.6	51 31.00	-19.71	-0 19.77	+10.66	-1.70	-17.30	18 55 14.84	52 31 57.9
18 55 46.1	8.8	56 30.50	56 12.4	28 59.75	-14.60	-0 19.79	+11.67	-1.71	-17.35	18 56 14.43	52 54 35.6
18 57 11.6	8.7	57 55.02	57 31.6	17 53.95	-19.25	-0 19.76	+10.57	-1.72	-17.30	18 57 39.18	52 5 36.2
18 58 27.1	9.1	59 11.20	58 49.9	45 56.05	-17.31	-0 19.77	+10.66	-1.73	-17.30	18 58 55.22	52 37 36.5
18 59 56.8	8.8	0 40.76	0 14.0	8 10.60	-21.96	-0 19.76	+10.72	-1.74	-17.30	19 0 24.88	52 15 17.9
19 0 52.5	9.1	1 35.66	1 10.7	32 38.20	-20.21	-0 19.79	+11.22	-1.75	-17.20	19 1 19.60	52 50 53.0
19 1 52.4	8.6	2 35.46	2 11.1	39 48.65	-19.79	-0 19.77	+11.56	-1.76	-17.20	19 2 19.45	52 43 43.6
19 3 0.3	8.7	3 42.46	3 19.8	47 22.70	-18.03	-0 19.81	+12.04	-1.77	-17.25	19 3 26.19	53 36 12.1
19 3 56.2	8.8	4 40.30	4 17.4	27 19.95	-18.48	-0 19.80	+11.26	-1.77	-17.25	19 4 24.21	52 56 14.0
19 4 48.0	9.5	5 32.18	5 10.9	46 7.35	-17.31	-0 19.78	+10.73	-1.78	-17.20	19 5 16.19	52 37 27.6
19 5 51.5	8.3	6 35.94	.....	.....	.....	-0 19.78	.....	-1.78	.....	19 6 20.02	.....
19 7 8.8	8.7	7 50.44	7 19.2	44 24.55	-24.17	-0 19.85	+13.47	-1.82	-17.25	19 7 33.85	54 39 6.9
19 8 22.7	8.5	9 7.18	8 38.7	57 56.05	-23.27	-0 19.78	+10.81	-1.80	-17.15	19 8 51.25	52 25 34.2
19 9 38.5	8.7	10 23.42	9 56.3	28 29.20	-22.87	-0 19.74	+ 9.38	-1.80	-17.05	19 10 7.89	50 55 0.6
19 10 20.8	8.0	11 4.60	10 49.3	23 55.50	-12.33	-0 19.80	+11.79	-1.82	-17.15	19 10 48.50	52 59 47.3
19 11 10.4	8.3	11 55.46	11 31.7	44 45.25	-19.34	-0 19.78	+11.50	-1.83	-17.15	19 11 39.47	52 38 50.6
19 12 16.9	8.1	13 0.42	12 36.0	1 54.90	-19.04	-0 19.85	+12.75	-1.86	-17.15	19 12 43.91	54 21 42.8
19 13 6.7	8.6	13 51.20	13 31.3	39 14.30	-16.86	-0 19.73	+ 9.47	-1.82	-17.00	19 13 35.73	50 44 22.8
19 14 12.1	8.8	14 56.42	14 28.8	21 58.10	-22.23	-0 19.81	+11.25	-1.85	-17.10	19 14 40.32	53 1 35.7
19 15 11.8	8.6	15 56.06	15 30.0	32 58.75	-21.11	-0 19.80	+11.30	-1.86	-17.10	19 15 40.01	52 50 36.5
19 17 29.6	8.9	18 14.40	17 51.8	41 20.95	-18.33	-0 19.78	+10.86	-1.87	-17.00	19 17 58.42	52 42 17.5
19 18 22.9	8.7	19 7.66	18 53.5	57 9.80	-11.59	-0 19.78	+10.86	-1.87	-17.00	19 18 51.75	52 26 35.7
19 19 7.4	7.8	19 52.66	19 42.9	35 31.70	- 7.93	-0 19.78	+10.95	-1.89	-17.00	19 19 36.65	52 48 17.8
19 20 12.8	9.0	20 57.82	20 36.5	43 2.85	-17.29	-0 19.78	+11.19	-1.89	-17.00	19 20 41.85	52 40 37.8
19 21 9.7	8.8	21 56.64	21 36.0	10 56.00	-16.90	-0 19.77	+10.29	-1.89	-16.95	19 21 40.80	52 12 44.6
19 21 58.5	8.7	22 44.54	22 28.6	14 36.35	-13.07	-0 19.77	+11.04	-1.90	-16.95	19 22 28.71	52 9 9.1
19 23 52.6	5.8	24 38.12	24 6.8	19 34.85	-25.76	-0 19.77	+10.77	-1.91	-16.90	19 24 22.32	52 3 58.3
19 24 39.1	8.0	25 24.44	25 8.6	53 28.90	-12.88	-0 19.78	+11.17	-1.92	-16.90	19 25 8.53	52 30 17.7
19 26 23.1	8.9	27 8.50	26 40.8	4 41.65	-22.68	-0 19.77	+11.10	-1.93	-16.85	19 26 52.66	52 18 55.8
19 27 10.7	9.0	27 57.40	27 48.3	56 31.95	- 7.42	-0 19.78	+10.77	-1.94	-16.85	19 27 41.51	52 27 20.7

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
19 28 12.9	8.2	28 57.82	28 43.2	40 4.55	-11.84	-0 19.78	+10.70	-1.95	-16.85	19 28 41.87	52 43 43.9
19 29 4.2	9.0	29 49.54	29 39.4	45 12.70	-8.21	-0 19.78	+10.68	-1.95	-16.85	19 29 33.62	52 38 39.6
19 30 35.9	8.8	31 21.50	30 53.3	59 10.20	-23.04	-0 19.78	+11.08	-1.96	-16.80	19 31 5.64	52 24 28.2
19 31 26.2	7.0	32 12.02	31 46.1	10 2.45	-21.24	-0 19.77	+10.06	-1.97	-16.80	19 31 56.22	52 13 37.0
19 33 2.1	8.9	33 48.60	33 23.4	7 58.65	-21.12	-0 19.75	+9.67	-1.96	-16.70	19 33 33.06	51 15 41.2
19 34 2.4	8.7	34 49.18	34 30.0	55 27.50	-16.01	-0 19.76	+9.42	-1.97	-16.70	19 34 33.59	51 28 17.5
19 35 8.7	7.9	35 56.12	35 33.7	50 46.70	-18.70	-0 19.76	+9.57	-1.97	-16.65	19 35 40.52	51 32 56.2
19 36 37.7	9.0	37 23.72	37 14.2	18 0.80	-7.82	-0 19.77	+10.73	-2.00	-16.65	19 37 7.97	52 5 54.6
19 37 44.3	8.9	38 30.54	38 10.3	4 48.95	-16.62	-0 19.77	+11.22	-2.01	-16.65	19 38 14.75	52 18 58.5
19 39 35.9	8.9	40 21.66	40 0.6	22 3.55	-16.99	-0 19.81	+11.36	-2.03	-16.65	19 40 5.67	53 1 44.2
19 40 29.7	8.8	41 16.18	40 49.1	11 39.25	-22.24	-0 19.77	+10.38	-2.03	-16.60	19 41 0.43	52 12 2.6
19 41 40.9	8.5	42 26.94	42 7.2	37 58.45	-15.96	-0 19.79	+11.31	-2.04	-16.60	19 42 11.05	52 45 51.1
19 42 54.0	8.8	43 39.06	43 10.9	34 24.45	-22.82	-0 19.79	+11.57	-2.05	-16.55	19 43 23.16	52 49 18.9
19 43 57.3	8.3	44 41.48	44 16.4	30 39.45	-19.33	-0 19.87	+13.06	-2.09	-16.55	19 44 24.98	54 53 9.2
19 45 31.5	8.7	46 17.92	45 49.6	39 36.25	-22.94	-0 19.79	+11.52	-2.07	-16.50	19 46 2.06	52 44 7.8
19 46 59.0	...	47 45.46	47 10.8	43 23.00	-28.17	-0 19.79	+11.09	-2.08	-16.45	19 47 29.62	52 40 15.9
19 48 33.3	8.0	49 19.26	48 55.2	29 39.20	-19.46	-0 19.79	+11.78	-2.09	-16.45	19 49 3.38	52 54 9.6
19 49 54.2	9.3	50 40.50	50 13.6	47 0.50	-21.87	-0 19.79	+10.88	-2.10	-16.40	19 50 24.70	52 36 45.4
19 51 26.5	8.8	52 13.22	51 46.7	54 57.85	-21.61	-0 19.79	+11.35	-2.10	-16.35	19 51 57.47	52 28 49.3
19 52 47.1	8.7	53 31.86	52 1.0	42 23.65	-23.91	-0 19.86	+13.13	-2.16	-16.35	19 53 15.48	54 41 23.4
19 53 51.8	8.8	54 39.30	54 17.2	54 9.30	-18.02	-0 19.79	+11.28	-2.12	-16.30	19 54 23.56	52 29 42.2
19 55 9.8	8.5	55 57.12	55 34.9	49 51.60	-18.07	-0 19.79	+11.48	-2.13	-16.30	19 55 41.37	52 34 0.5
19 56 46.9	8.7	57 34.66	57 12.7	59 24.10	-17.97	-0 19.79	+11.24	-2.14	-16.25	19 57 18.96	52 24 28.4
ZONE 114, SEPTEMBER 1, 1871.											
18 23 37.9	8.5	24 20.90	24 7.4	23 11.10	-10.88	-0 20.08	+11.77	-1.44	-17.65	18 24 4.61	53 0 17.3
18 25 14.9	8.3	25 59.24	25 39.3	1 31.90	-16.27	-0 20.06	+10.72	-1.45	-17.60	18 25 43.13	52 21 50.7
18 26 39.4	9.5	27 22.74	27 4.4	51 10.90	-14.90	-0 20.06	+10.87	-1.45	-17.60	18 27 6.59	52 32 13.7
18 28 5.1	8.2	28 48.36	28 34.4	2 17.35	-11.45	-0 20.06	+10.93	-1.47	-17.60	18 28 32.24	52 21 11.2
18 28 52.9	7.5	29 35.76	29 27.0	22 14.05	-7.25	-0 20.04	+10.61	-1.48	-17.60	18 29 19.73	52 1 18.7
18 30 20.7	8.4	31 2.92	30 44.9	35 58.60	-14.57	-0 20.06	+11.10	-1.49	-17.65	18 30 46.68	52 47 27.8
18 33 57.2	8.0	34 39.30	34 12.8	41 3.70	-20.50	-0 20.13	+13.11	-1.52	-17.75	18 34 22.47	54 42 19.9
18 36 26.9	8.9	37 11.76	36 52.8	24 41.30	-16.01	-0 20.02	+9.88	-1.53	-17.50	18 36 55.98	50 58 44.7
18 37 26.9	8.8	38 9.46	37 54.7	28 18.50	-11.67	-0 20.11	+12.84	-1.55	-17.70	18 37 52.85	53 55 14.9
18 38 22.6	9.1	39 4.40	38 48.2	40 36.15	-12.83	-0 20.10	+12.05	-1.55	-17.70	18 38 47.86	53 42 55.6
18 39 32.7	8.8	40 14.82	39 57.9	46 56.45	-13.43	-0 20.10	+12.18	-1.56	-17.65	18 39 58.30	53 36 35.3
18 40 24.3	6.5	41 5.84	40 47.2	38 51.30	-14.73	-0 20.10	+12.69	-1.57	-17.65	18 40 49.28	53 44 40.0
18 41 52.2	9.0	42 35.20	42 13.1	35 17.40	-17.89	-0 20.06	+10.95	-1.58	-17.60	18 42 18.92	52 48 9.5
18 43 26.5	8.6	44 10.96	43 52.5	57 11.25	-15.10	-0 20.06	+10.97	-1.59	-17.55	18 43 54.77	52 26 19.1
18 44 30.2	8.6	45 13.72	45 2.9	20 3.05	-8.69	-0 20.08	+11.25	-1.60	-17.60	18 44 57.35	53 3 34.3
18 45 54.4	9.0	46 36.54	46 16.1	52 12.35	-16.62	-0 20.06	+11.00	-1.61	-17.55	18 46 20.32	52 31 17.3
18 47 28.5	8.6	48 11.20	47 44.1	41 24.75	-21.98	-0 20.06	+10.98	-1.62	-17.55	18 47 54.94	52 42 0.1
18 47 45.4	9.0	48 30.12	47 59.1	41 24.75	-25.15	-0 20.06	+10.92	-1.62	-17.55	18 48 13.86	52 41 57.0
18 48 39.2	7.0	49 21.98	49 3.6	28 41.80	-14.86	-0 20.07	+11.74	-1.63	-17.55	18 49 5.65	52 54 51.4
18 49 18.7	9.0	50 4.12	49 55.7	17 3.50	-6.91	-0 20.04	+10.65	-1.63	-17.50	18 49 48.03	52 6 36.8
18 51 34.0	8.9	52 18.24	51 58.8	23 7.95	-15.63	-0 20.08	+11.71	-1.65	-17.55	18 52 1.88	53 0 25.4
18 52 37.2	9.5	53 19.58	53 4.9	9 6.90	-11.50	-0 20.11	+13.33	-1.67	-17.60	18 53 2.86	54 14 32.5
18 53 54.5	9.0	54 36.10	54 19.6	3 49.80	-12.88	-0 20.11	+13.36	-1.68	-17.55	18 54 19.35	54 19 48.7
18 54 45.9	8.8	55 31.12	55 19.0	51 41.45	-9.85	-0 20.06	+11.01	-1.68	-17.45	18 55 14.89	52 31 58.1
18 55 46.1	9.0	56 30.84	56 13.7	29 0.55	-13.81	-0 20.07	+11.79	-1.69	-17.50	18 56 14.51	52 54 36.2
18 57 11.6	8.6	57 55.31	57 32.5	17 54.95	-18.76	-0 20.04	+10.69	-1.69	-17.40	18 57 39.22	52 5 36.3
18 58 27.1	9.4	59 11.48	58 49.7	45 58.00	-17.72	-0 20.06	+10.88	-1.70	-17.45	18 58 55.24	52 37 34.8
18 59 56.8	8.7	0 41.04	0 17.6	8 14.40	-19.18	-0 20.04	+10.92	-1.71	-17.40	19 0 24.91	52 15 17.6

R. A. 1855.0 According to B. D.			Obs. Magn.	Mean of R. A. Wires.		Mean of Dec. Wires.		Mean of Circle Readings.		Red to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.			Mean Dec. 1875.0.			
h	m	s		m	s	m	s	'	"		m	s	"	s	"	h	m	s	°	'	"
19	0	52.5	9.4	1	35.68	1	25.0	32	50.45	— 8.57	—0	20.07	+11.56	—1.72	—17.45	19	1	19.37	52	50	53.0
19	1	52.4	8.3	2	35.64	2	18.0	39	53.10	—14.27	—0	20.06	+11.77	—1.73	—17.40	19	2	19.37	52	43	45.3
19	3	0.3	8.5	3	42.58	3	28.0	47	30.55	—11.60	—0	20.10	+12.31	—1.75	—17.45	19	3	26.04	53	36	11.3
19	3	56.2	8.5	4	40.48	4	19.1	27	21.35	—17.27	—0	20.07	+11.47	—1.75	—17.40	19	4	24.14	52	56	14.4
19	4	48.0	9.5	5	32.54	5	23.1	46	15.45	— 7.64	—0	20.06	+11.01	—1.75	—17.40	19	5	16.30	52	37	29.8
19	5	51.5	8.7	6	36.02	6	50.7	0	51.40	+12.01	—0	20.06	+10.69	—1.76	—17.35	19	6	19.84	52	23	13.6
19	7	8.8	9.0	7	50.78	7	33.5	44	36.25	—13.40	—0	20.13	+13.84	—1.79	—17.45	19	7	33.94	54	39	6.8
19	8	22.7	8.2	9	7.26	8	59.4	58	14.10	— 6.45	—0	20.06	+11.20	—1.78	—17.30	19	8	51.07	52	25	33.8
19	9	38.5	8.8	10	23.60	10	9.2	28	40.50	—12.15	—0	20.02	+ 9.65	—1.77	—17.25	19	10	7.82	50	55	0.7
19	10	20.8	8.0	11	4.86	10	48.4	23	56.10	—13.30	—0	20.07	+11.89	—1.80	—17.35	19	10	48.51	52	59	46.2
19	11	10.4	8.7	11	55.60	11	37.1	44	50.20	—15.03	—0	20.06	+11.69	—1.80	—17.30	19	11	39.36	52	38	50.6
19	12	16.9	8.5	13	0.62	12	37.5	1	55.40	—18.02	—0	20.13	+12.95	—1.82	—17.35	19	12	43.87	54	21	43.9
19	13	6.7	9.0	13	51.38	13	33.5	39	17.80	—15.17	—0	20.00	+ 9.54	—1.79	—17.15	19	13	35.67	50	44	21.5
19	14	12.1	8.8	14	56.76	14	37.2	22	5.40	—15.79	—0	20.08	+11.52	—1.82	—17.30	19	14	40.42	53	1	35.5
19	15	11.8	8.5	15	56.24	15	32.9	33	0.75	—18.84	—0	20.07	+11.48	—1.84	—17.30	19	15	39.94	52	50	37.3
19	17	29.6	9.3	18	14.54	17	49.2	41	19.20	—20.52	—0	20.06	+10.98	—1.84	—17.25	19	17	58.31	52	42	17.5
19	18	22.9	8.0	19	7.90	18	52.0	57	9.25	—12.98	—0	20.06	+10.97	—1.85	—17.20	19	18	51.73	52	26	35.3
19	20	12.8	9.0	20	57.88	20	36.2	43	3.00	—17.62	—0	20.06	+11.31	—1.87	—17.20	19	20	41.65	52	40	37.9
19	21	9.7	8.8	21	56.92	21	36.0	10	58.40	—17.15	—0	20.05	+10.45	—1.87	—17.15	19	21	40.82	52	12	42.5
19	21	58.5	8.2	22	44.78	22	30.6	14	39.05	—11.67	—0	20.04	+11.17	—1.87	—17.15	19	22	28.71	52	9	8.3
19	23	52.6	7.0	24	38.36	24	13.1	19	40.05	—20.82	—0	20.04	+10.95	—1.89	—17.10	19	24	22.31	52	3	58.6
19	24	39.1	8.2	25	24.68	25	8.5	53	29.20	—13.20	—0	20.06	+11.30	—1.90	—17.10	19	25	8.51	52	30	17.6
19	26	23.1	8.5	27	8.62	26	51.9	4	51.40	—13.67	—0	20.05	+11.33	—1.91	—17.05	19	26	52.52	52	18	55.6
19	27	10.7	9.0	27	57.68	27	36.9	56	21.20	—16.97	—0	20.06	+10.78	—1.91	—17.05	19	27	41.54	52	27	22.3
19	28	12.9	8.3	28	57.95	28	39.0	40	0.75	—15.33	—0	20.06	+10.83	—1.92	—17.05	19	28	41.75	52	43	44.7
19	29	4.2	8.9	29	49.86	29	31.8	45	8.85	—14.71	—0	20.06	+10.77	—1.93	—17.05	19	29	33.68	52	38	37.5
19	30	35.9	8.5	31	21.66	31	0.5	59	17.10	—17.23	—0	20.06	+11.29	—1.94	—17.00	19	31	5.54	52	24	27.8
19	31	26.2	6.5	32	12.08	31	58.8	10	14.55	—10.91	—0	20.05	+10.39	—1.94	—17.00	19	31	56.03	52	13	36.0
19	33	2.1	8.7	33	48.80	33	27.0	8	1.70	—18.27	—0	20.02	+ 9.81	—1.94	—17.05	19	33	33.01	51	15	41.4
19	34	2.4	8.8	34	49.20	.....	.....	.....	.....	.....	—0	20.03	.....	—1.95	.....	19	34	33.36	.....	.....	.....
19	35	8.7	8.2	35	56.24	35	32.8	50	46.95	—19.49	—0	20.03	+ 9.71	—1.96	—17.00	19	35	40.38	51	32	55.5
19	36	37.7	8.9	37	23.98	36	58.9	17	48.05	—20.65	—0	20.04	+10.65	—1.97	—16.90	19	37	7.99	52	5	54.8
19	37	44.3	8.9	38	30.70	38	8.5	4	47.45	—18.17	—0	20.05	+11.28	—1.98	—16.90	19	38	14.66	52	18	58.8
19	39	35.9	8.8	40	21.86	39	54.5	21	57.90	—22.07	—0	20.08	+11.40	—2.01	—16.85	19	40	5.62	53	1	45.2
19	40	29.7	9.0	41	16.24	40	52.7	11	42.45	—19.28	—0	20.04	+10.56	—2.00	—16.80	19	41	0.25	52	12	3.0
19	41	40.9	8.6	42	27.02	42	8.1	38	0.05	—15.31	—0	20.06	+11.42	—2.02	—16.80	19	42	10.88	52	45	50.6
19	42	54.0	9.0	43	39.28	43	16.5	34	28.50	—18.45	—0	20.06	+11.72	—2.03	—16.75	19	43	23.13	52	49	19.7
19	43	57.3	8.5	44	41.56	44	26.0	30	46.75	—11.94	—0	20.14	+13.38	—2.07	—16.80	19	44	24.81	54	53	9.9
19	45	31.5	8.7	46	18.14	45	51.7	39	38.20	—21.40	—0	20.06	+11.63	—2.04	—16.70	19	46	2.04	52	44	7.9
19	46	59.0	5.3	47	45.68	47	10.6	43	21.55	—28.50	—0	20.06	+11.18	—2.05	—16.70	19	47	29.60	52	40	17.5
19	48	33.3	8.5	49	19.32	48	51.7	29	37.05	—22.21	—0	20.06	+11.80	—2.08	—16.65	19	49	3.18	52	54	9.4
19	49	54.2	9.0	50	40.86	50	20.4	47	7.10	—16.67	—0	20.06	+11.09	—2.08	—16.60	19	50	24.81	52	36	44.6
19	52	47.1	8.0	53	31.96	53	11.3	42	32.10	—16.00	—0	20.13	+13.47	—2.13	—16.65	19	53	15.34	54	41	23.5
19	53	51.8	8.9	54	39.44	54	15.0	54	6.95	—22.45	—0	20.06	+11.36	—2.11	—16.55	19	54	23.44	52	29	40.6
19	55	9.8	8.9	55	57.38	55	37.6	49	54.60	—16.12	—0	20.06	+11.58	—2.12	—16.50	19	55	41.37	52	33	59.9
19	56	46.9	8.7	57	34.66	57	7.5	59	21.75	—22.22	—0	20.06	+11.22	—2.12	—16.45	19	57	18.71	52	24	26.8
ZONE 115, SEPTEMBER 2, 1871.																					
19	9	59.7	8.0	10	45.34	10	22.4	41	54.60	—19.42	—0	20.25	+ 8.84	—1.75	—17.40	19	10	29.40	50	41	38.2
19	11	8.0	8.9	11	53.20	11	27.8	27	56.70	—21.44	—0	20.26	+ 9.23	—1.76	—17.35	19	11	37.20	50	55	34.8
19	12	10.9	8.5	12	57.26	12	33.7	48	51.15	—20.07	—0	20.25	+ 9.06	—1.76	—17.35	19	12	41.36	50	34	42.0
19	13	6.3	8.7	13	52.36	13	32.5	49	40.75	—16.92	—0	20.25	+ 9.24	—1.77	—17.35	19	13	36.46	50	33	56.0
19	14	1.8	8.8	14	48.26	14	23.4	8	21.90	—21.31	—0	20.24	+ 8.61	—1.78	—17.35	19	14	32.43	50	15	10.1

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
19 14 52.2	8.3	15 39.00	15 14.7	44 58.15	-20.63	-0 20.25	+ 9.35	-1.78	-17.35	19 15 23.09	50 38 35.6
19 15 14.3	8.5	16 0.30	.....	.....	.....	-0 20.25	.....	-1.78	.....	19 15 44.43	.....
19 18 5.3	7.0	18 50.94	18 23.8	15 20.10	-22.27	-0 20.28	+10.00	-1.82	-17.40	19 18 34.65	52 8 13.7
19 19 20.1	8.3	20 5.18	19 36.9	36 2.00	-23.95	-0 20.25	+ 8.76	-1.81	-17.30	19 19 49.25	50 47 29.3
19 20 19.4	9.0	21 2.86	20 41.9	54 29.00	-16.33	-0 20.36	+13.40	-1.86	-17.45	19 20 45.90	54 29 14.7
19 21 37.3	8.9	22 21.84	21 59.1	12 39.40	-17.79	-0 20.34	+12.72	-1.87	-17.40	19 22 4.99	54 11 2.7
19 22 38.2	8.6	23 25.08	22 57.9	39 35.65	-23.05	-0 20.25	+ 9.35	-1.84	-17.25	19 23 9.15	50 43 58.4
19 23 31.5	8.6	24 18.36	24 3.9	14 48.70	-12.44	-0 20.24	+ 8.93	-1.84	-17.20	19 24 2.59	50 8 55.8
19 24 52.4	8.7	25 38.74	25 17.2	57 20.70	-17.94	-0 20.27	+ 9.74	-1.86	-17.25	19 25 22.65	51 26 19.5
19 26 9.3	9.2	26 56.94	26 31.0	39 1.20	-21.95	-0 20.25	+ 9.26	-1.86	-17.20	19 26 41.03	50 44 35.0
19 27 26.1	9.5	28 13.96	27 52.0	13 56.95	-18.87	-0 20.24	+ 8.66	-1.86	-17.15	19 27 58.20	50 9 42.2
19 28 13.8	8.2	29 1.78	28 44.6	56 7.05	-14.66	-0 20.25	+ 8.49	-1.87	-17.15	19 28 45.95	50 27 36.4
19 29 10.0	8.2	29 56.90	30 10.6	44 33.10	+11.63	-0 20.25	+ 9.40	-1.88	-17.15	19 29 41.03	50 39 37.8
19 30 34.1	6.5	31 21.66	30 54.3	25 26.10	-23.10	-0 20.26	+ 8.79	-1.90	-17.15	19 31 5.70	50 58 10.0
19 31 19.3	9.5	32 6.94	.....	.....	.....	-0 20.26	.....	-1.90	.....	19 31 51.01	.....
19 34 24.8	7.0	35 12.08	34 38.1	26 30.55	-28.68	-0 20.26	+ 8.88	-1.92	-17.10	19 34 56.15	50 57 1.3
19 35 15.2	8.5	36 2.78	35 45.7	34 45.45	-14.47	-0 20.26	+ 9.57	-1.94	-17.10	19 35 46.87	50 49 1.6
19 36 15.5	8.0	37 3.02	36 40.2	35 24.15	-18.88	-0 20.27	+ 9.74	-1.94	-17.10	19 36 46.90	51 48 18.9
19 37 19.5	8.2	38 7.90	37 45.3	18 33.90	-19.41	-0 20.24	+ 8.53	-1.93	-17.00	19 37 52.20	50 5 7.9
19 38 13.7	9.0	39 2.94	38 40.4	54 43.65	-19.17	-0 20.25	+ 9.17	-1.94	-17.00	19 38 47.15	50 28 59.3
19 39 53.0	8.7	40 40.76	40 15.9	37 40.35	-21.09	-0 20.25	+ 9.03	-1.95	-17.00	19 40 24.92	50 46 1.1
19 41 33.1	9.0	42 21.42	42 41.6	56 59.85	+17.22	-0 20.25	+ 8.65	-1.96	-16.95	19 42 5.65	50 27 20.0
19 42 45.2	8.5	43 33.78	43 21.3	41 0.85	-10.60	-0 20.25	+ 8.78	-1.97	-16.95	19 43 17.97	50 42 51.8
19 45 7.7	8.8	45 54.68	45 32.1	40 11.50	-18.74	-0 20.27	+ 9.59	-2.00	-16.95	19 45 38.63	51 43 34.5
19 46 18.5	9.5	47 5.94	46 44.7	38 18.80	-17.57	-0 20.27	+10.26	-2.01	-16.90	19 46 49.89	51 45 29.4
19 47 36.0	7.8	48 23.94	47 52.5	3 46.50	-26.84	-0 20.24	+ 8.67	-2.00	-16.80	19 48 8.24	50 19 51.5
19 48 44.6	8.8	49 33.04	49 5.8	41 18.85	-23.06	-0 20.25	+ 8.68	-2.01	-16.80	19 49 17.26	50 42 23.2
19 50 58.1	8.0	51 47.28	51 17.4	54 18.50	-25.47	-0 20.25	+ 8.99	-2.02	-16.75	19 51 31.56	50 29 22.3
19 52 31.8	8.5	53 20.40	52 51.3	56 1.35	-24.81	-0 20.25	+ 8.32	-2.03	-16.75	19 53 4.70	50 27 39.8
19 53 45.8	8.5	54 35.28	54 6.9	26 3.10	-23.95	-0 20.26	+ 8.90	-2.05	-16.75	19 54 19.47	50 57 39.9
19 57 59.6	...	58 49.12	58 20.0	11 32.00	-24.94	-0 20.24	+ 8.17	-2.06	-16.60	19 58 33.53	50 12 10.8
20 0 16.0	7.5	1 4.68	0 40.1	27 47.70	-20.76	-0 20.26	+ 9.26	-2.09	-16.60	20 0 48.92	50 56 1.0
20 1 13.1	7.8	2 3.06	1 40.2	18 22.65	-19.67	-0 20.24	+ 8.49	-2.09	-16.55	20 1 47.50	50 5 26.7
20 2 6.5	8.8	2 55.74	2 42.0	42 23.70	-11.12	-0 20.29	+11.15	-2.13	-16.55	20 2 39.57	52 41 37.2
20 3 4.7	9.0	3 54.36	3 38.0	25 17.50	-13.83	-0 20.26	+ 8.94	-2.11	-16.50	20 3 38.61	50 58 38.8
20 4 34.8	7.5	5 25.36	4 52.5	10 40.40	-28.19	-0 20.24	+ 7.94	-2.11	-16.45	20 5 9.81	50 13 1.0
20 5 45.9	8.6	6 36.02	6 9.0	26 17.70	-22.77	-0 20.26	+ 8.91	-2.13	-16.45	20 6 20.30	50 57 30.5
20 6 38.3	6.5	7 26.92	7 7.3	23 9.65	-16.16	-0 20.28	+10.52	-2.15	-16.45	20 7 10.96	52 0 47.0
20 7 45.6	7.8	8 34.76	8 4.3	5 15.40	-25.53	-0 20.26	+ 9.07	-2.15	-16.45	20 8 18.98	51 18 30.8
20 9 42.0	7.8	10 32.08	10 4.2	32 17.75	-23.48	-0 20.26	+ 9.03	-2.15	-16.35	20 10 16.42	50 51 31.1
20 11 48.0	8.7	12 39.94	12 8.3	38 22.75	-26.77	-0 20.25	+ 9.08	-2.16	-16.30	20 12 24.33	50 45 23.5
20 14 37.8	8.8	15 28.72	15 9.7	53 40.35	-16.19	-0 20.25	+ 9.02	-2.17	-16.25	20 15 13.20	50 30 17.3
20 15 50.9	9.5	16 41.38	16 23.5	43 11.45	-15.19	-0 20.25	+ 9.13	-2.18	-16.25	20 16 25.83	50 40 47.7
20 16 50.0	9.2	17 40.80	17 26.4	16 44.30	-12.37	-0 20.24	+ 8.30	-2.18	-16.20	20 17 25.38	50 7 17.1
20 17 57.4	8.0	18 48.78	18 20.3	15 22.65	-24.46	-0 20.24	+ 7.86	-2.19	-16.15	20 18 33.37	50 8 26.7
20 19 14.0	8.8	20 4.84	19 43.4	0 31.95	-18.27	-0 20.25	+ 8.30	-2.20	-16.10	20 19 49.36	50 23 24.4
20 20 31.6	9.1	21 23.06	20 53.7	27 38.60	-24.81	-0 20.26	+ 9.17	-2.22	-16.10	20 21 7.49	50 56 12.4
20 22 24.9	8.5	23 15.26	22 45.6	42 7.45	-25.19	-0 20.25	+ 8.81	-2.23	-16.05	20 22 59.76	50 41 43.5
ZONE 116, SEPTEMBER 7, 1871.											
19 1 24.8	8.4	2 10.88	1 47.1	49 17.35	-19.37	-0 21.79	+11.07	-1.55	-18.40	19 1 53.10	52 34 13.5
19 3 0.3	8.4	3 44.00	3 22.9	47 23.55	-16.76	-0 21.83	+11.89	-1.56	-18.45	19 3 25.91	53 36 11.3
19 3 10.7	8.2	3 56.10	.....	.....	.....	-0 21.83	.....	-1.57	.....	19 3 38.00	.....

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R.A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
19 4 51.2	7.5	5 38.86	5 22.5	13 48.95	-14.07	-0 21.74	+ 8.56	-1.57	-18.20	19 5 21.69	50 9 46.1
19 6 20.0	9.1	7 8.34	6 49.3	10 6.65	-16.28	-0 21.74	+ 8.00	-1.58	-18.20	19 6 51.16	50 13 26.1
19 7 17.2	8.9	8 4.68	7 49.3	5 32.30	-13.17	-0 21.74	+ 8.19	-1.59	-18.20	19 7 47.48	50 18 4.1
19 9 59.7	8.3	10 46.56	10 20.4	41 50.00	-22.14	-0 21.75	+ 8.69	-1.61	-18.20	19 10 29.26	50 41 38.8
19 11 8.0	8.7	11 54.70	11 34.8	27 58.30	-16.79	-0 21.76	+ 9.22	-1.62	-18.25	19 11 37.34	50 55 36.7
19 12 10.9	8.8	12 58.60	12 32.6	48 47.75	-22.11	-0 21.75	+ 8.92	-1.63	-18.20	19 12 41.33	50 34 42.0
19 13 6.3	8.7	13 53.70	13 33.0	49 38.00	-17.60	-0 21.75	+ 9.09	-1.64	-18.20	19 13 36.43	50 33 56.8
19 14 1.8	8.8	14 49.62	14 25.4	8 20.05	-20.72	-0 21.74	+ 8.55	-1.64	-18.15	19 14 32.43	50 15 11.4
19 14 52.2	8.4	15 40.28	15 24.1	45 0.95	-13.76	-0 21.75	+ 8.51	-1.65	-18.20	19 15 22.99	50 38 37.7
19 15 14.3	8.6	16 1.56	16 28.3	45 0.95	+22.67	-0 21.75	+ 8.38	-1.65	-18.20	19 15 44.27	50 39 14.0
19 16 3.3	8.6	16 51.76	16 44.0	55 35.35	- 6.65	-0 21.75	+ 8.43	-1.66	-18.15	19 16 34.51	50 28 10.8
19 16 44.5	7.5	17 33.08	17 28.3	17 35.45	- 4.12	-0 21.74	+ 8.40	-1.66	-18.15	19 17 15.93	50 6 13.4
19 18 5.3	6.5	18 52.20	18 23.7	15 17.15	-23.34	-0 21.78	+ 9.97	-1.68	-18.25	19 18 34.55	52 8 14.4
19 19 20.1	8.5	20 6.52	19 43.0	36 3.35	-19.89	-0 21.75	+ 8.82	-1.68	-18.15	19 19 49.22	50 47 31.0
19 20 19.4	8.8	21 4.20	20 41.6	54 26.05	-17.58	-0 21.86	+13.20	-1.71	-18.30	19 20 45.89	54 29 15.1
19 26 9.3	8.9	26 58.30	26 35.6	39 0.75	-19.23	-0 21.75	+ 9.18	-1.73	-18.10	19 26 41.02	50 44 36.9
19 27 26.1	9.3	28 15.32	27 48.7	13 50.70	-22.82	-0 21.74	+ 8.47	-1.74	-18.05	19 27 58.18	50 9 43.1
19 28 13.8	8.0	29 3.10	28 42.1	56 0.40	-17.90	-0 21.75	+ 8.41	-1.75	-18.10	19 28 45.89	50 27 38.5
19 29 10.0	8.8	29 58.34	29 45.2	44 8.25	-11.12	-0 21.75	+ 9.20	-1.75	-18.15	19 29 41.10	50 39 38.5
19 30 34.1	5.8	31 22.96	30 56.9	25 25.20	-21.95	-0 21.76	+ 8.79	-1.77	-18.10	19 31 5.63	50 58 10.8
19 31 19.3	10.0	32 8.32	32 4.6	27 41.67	- 3.12	-0 21.76	+ 9.34	-1.77	-18.10	19 31 51.02	50 56 13.9
19 34 24.8	7.8	35 13.52	34 42.8	26 30.75	-25.89	-0 21.76	+ 8.90	-1.79	-18.05	19 34 56.22	50 57 2.7
19 35 15.2	8.1	36 4.12	35 44.4	34 40.40	-16.67	-0 21.76	+ 9.40	-1.81	-18.05	19 35 46.84	50 49 3.0
19 36 15.5	8.0	37 4.26	36 58.3	35 36.70	- 4.89	-0 21.77	+ 9.92	-1.83	-18.10	19 36 46.75	51 48 19.3
19 37 19.5	7.8	38 9.18	37 40.8	18 26.65	-24.40	-0 21.74	+ 8.33	-1.83	-18.00	19 37 52.08	50 5 8.7
19 38 13.7	9.0	39 4.30	38 44.8	54 42.75	-16.62	-0 21.75	+ 9.06	-1.82	-18.00	19 38 47.13	50 29 1.4
19 39 53.0	7.8	40 41.98	40 19.7	37 39.75	-18.80	-0 21.75	+ 9.00	-1.83	-18.00	19 40 24.76	50 46 2.6
19 40 38.2	9.2	41 27.52	41 24.6	30 42.15	- 2.45	-0 21.76	+ 8.96	-1.84	-17.95	19 41 10.26	50 53 16.9
19 42 45.2	8.7	43 35.18	43 4.9	40 42.85	-25.69	-0 21.75	+ 8.53	-1.85	-17.95	19 43 17.99	50 42 53.2
19 43 56.4	8.3	44 45.62	44 20.9	22 14.85	-20.80	-0 21.76	+ 9.17	-1.86	-17.95	19 44 28.36	51 1 27.0
19 45 7.7	8.9	45 56.08	45 31.2	40 6.35	-20.65	-0 21.77	+ 9.59	-1.88	-17.95	19 45 38.65	51 43 36.5
19 46 18.5	9.5	47 7.46	46 47.4	38 18.30	-16.66	-0 21.77	+10.21	-1.89	-17.95	19 46 50.03	51 45 29.4
19 47 36.0	8.0	48 25.16	47 55.2	3 45.60	-25.65	-0 21.74	+ 8.62	-1.89	-17.85	19 48 8.07	50 19 52.2
19 48 44.6	8.5	49 34.38	49 6.1	41 16.65	-24.00	-0 21.74	+ 8.67	-1.90	-17.85	19 49 17.22	50 42 23.2
19 49 44.8	8.8	50 35.06	50 9.4	19 29.25	-22.08	-0 21.73	+ 8.53	-1.90	-17.80	19 50 18.05	50 4 12.8
19 50 58.1	7.7	51 48.60	51 12.2	54 11.00	-31.01	-0 21.74	+ 8.78	-1.91	-17.80	19 51 31.50	50 29 22.7
19 52 31.8	8.9	53 21.78	52 55.4	56 2.55	-22.51	-0 21.74	+ 8.39	-1.92	-17.80	19 53 4.70	50 27 39.7
19 53 45.8	8.2	54 36.64	54 14.3	26 7.90	-18.81	-0 21.75	+ 9.01	-1.93	-17.80	19 54 19.46	50 57 39.0
19 55 7.8	7.4	55 56.80	55 28.6	4 24.45	-24.11	-0 21.73	+ 8.74	-1.94	-17.75	19 55 39.77	50 19 17.4
19 56 0.5	9.0	56 51.09	56 28.8	4 51.95	-19.07	-0 21.73	+ 8.91	-1.94	-17.75	19 56 34.08	50 18 55.4
19 56 46.5	9.4	57 36.90	57 27.8	45 21.15	- 7.73	-0 21.74	+ 8.66	-1.95	-17.75	19 57 19.81	50 38 37.5
19 57 59.6	7.8	58 50.60	58 33.7	11 41.25	-14.48	-0 21.73	+ 8.35	-1.96	-17.70	19 58 33.62	50 12 10.8
19 59 3.8	9.4	59 51.40	59 41.2	35 12.15	- 8.63	-0 21.74	+ 8.81	-1.97	-17.70	19 59 34.29	50 48 46.5
20 0 16.0	5.5	1 6.16	0 57.5	27 57.65	- 7.34	-0 21.75	+ 9.40	-1.98	-17.60	20 0 49.02	50 56 3.3
20 1 13.1	7.8	2 4.36	1 45.3	18 22.35	-16.41	-0 21.73	+ 8.47	-1.98	-17.65	20 1 47.42	50 5 28.9
20 2 6.5	9.0	2 57.08	2 40.1	42 17.65	-13.80	-0 21.78	+11.09	-2.02	-17.70	20 2 39.53	52 41 39.0
20 3 4.7	8.8	3 55.72	3 26.2	25 3.25	-24.87	-0 21.75	+ 8.77	-2.00	-17.65	20 3 38.59	50 58 40.4
20 4 34.8	7.7	5 26.72	5 5.1	10 47.60	-18.51	-0 21.73	+ 8.16	-2.00	-17.60	20 5 9.79	50 13 2.3
20 5 45.9	8.8	6 37.34	6 9.2	26 14.90	-23.70	-0 21.75	+ 8.96	-2.02	-17.60	20 6 20.24	50 57 31.0
20 6 38.3	7.5	7 28.30	7 6.9	23 5.45	-17.64	-0 21.77	+10.48	-2.04	-17.60	20 7 10.96	52 0 48.3
20 7 45.6	8.0	8 36.06	8 8.1	5 16.40	-23.44	-0 21.75	+ 9.18	-2.04	-17.55	20 8 18.90	51 18 30.6
20 8 37.1	9.5	9 28.72	9 29.4	15 41.05	+ 0.60	-0 21.73	+ 8.19	-2.03	-17.50	20 9 11.83	50 8 29.3
20 9 42.0	7.6	10 33.34	10 10.1	32 19.65	-19.61	-0 21.75	+ 9.10	-2.04	-17.50	20 10 16.30	50 51 31.7
20 11 48.0	9.1	12 41.40	12 6.9	38 18.00	-29.22	-0 21.74	+ 8.97	-2.06	-17.50	20 12 24.40	50 45 24.2
20 13 7.4	9.2	13 59.48	13 45.9	12 33.40	-11.66	-0 21.73	+ 8.55	-2.06	-17.45	20 13 42.62	50 11 26.4
20 14 37.8	8.2	15 30.10	15 2.1	53 29.45	-23.85	-0 21.74	+ 8.85	-2.08	-17.45	20 15 13.18	50 30 18.9

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
20 15 50.9	9.3	16 43.02	16 17.5	43 1.65	-21.64	-0 21.74	+ 9.02	-2.08	-17.40	20 16 26.08	50 40 49.5
20 16 50.0	8.8	17 42.32	17 13.3	16 28.70	-24.90	-0 21.73	+ 8.10	-2.08	-17.35	20 17 25.51	50 7 18.6
20 17 57.4	6.3	18 50.14	18 21.4	15 20.75	-24.63	-0 21.73	+ 7.93	-2.09	-17.35	20 18 33.34	50 8 27.0
20 19 14.0	8.4	20 6.16	19 42.4	0 27.35	-20.32	-0 21.74	+ 8.33	-2.10	-17.30	20 19 49.29	50 23 25.5
20 20 31.6	8.4	21 24.50	20 58.0	27 39.50	-22.37	-0 21.75	+ 9.23	-2.12	-17.30	20 21 7.54	50 56 12.6
20 21 24.5	9.0	22 17.25	22 8.1	15 26.45	-7.81	-0 21.73	+ 8.16	-2.11	-17.35	20 22 0.48	50 8 39.3
20 22 24.9	7.8	23 16.72	23 6.2	42 21.60	-8.91	-0 21.74	+ 9.06	-2.13	-17.25	20 22 59.83	50 41 44.4
20 23 25.2	9.0	24 17.08	23 58.6	49 57.25	-15.74	-0 21.74	+ 9.28	-2.13	-17.25	20 24 0.24	50 34 2.4
20 24 36.0	9.0	25 28.66	25 3.0	37 34.10	-21.76	-0 21.74	+ 9.03	-2.14	-17.20	20 25 11.79	50 46 19.6
20 25 45.4	8.7	26 36.96	26 8.9	15 24.75	-24.11	-0 21.73	+ 7.98	-2.14	-17.20	20 26 20.23	50 8 25.9
20 26 32.2	8.7	27 25.00	27 4.5	58 54.45	-17.49	-0 21.74	+ 8.93	-2.15	-17.15	20 27 8.21	50 25 4.0
20 28 57.8	9.0	29 50.00	29 23.8	22 23.15	-22.06	-0 21.76	+ 9.29	-2.17	-17.10	20 29 33.11	51 1 31.8
ZONE 117, SEPTEMBER 8, 1871.											
18 47 8.5	8.9	47 54.56	47 30.1	40 2.30	-20.31	-0 21.91	+ 9.87	-1.40	-18.45	18 47 36.91	51 43 22.8
18 49 11.6	9.2	49 57.88	49 37.5	58 14.35	-17.03	-0 21.91	+ 10.10	-1.42	-18.40	18 49 40.29	51 25 15.0
18 53 37.0	8.8	54 22.94	53 58.5	50 12.25	-20.47	-0 21.91	+ 9.45	-1.45	-18.40	18 54 5.32	51 33 14.5
18 56 38.2	9.3	57 24.94	56 56.7	59 38.95	-23.55	-0 21.91	+ 10.21	-1.48	-18.40	18 57 7.35	51 23 46.5
18 59 27.6	9.0	0 14.46	59 48.9	59 13.45	-21.38	-0 21.91	+ 10.18	-1.50	-18.40	18 59 56.87	51 24 15.1
19 2 2.4	9.5	2 49.06	2 17.3	3 17.45	-26.01	-0 21.93	+ 10.96	-1.52	-18.50	19 2 31.23	52 20 8.0
19 3 48.2	9.0	4 32.68	4 12.8	32 47.80	-16.46	-0 21.92	+ 10.52	-1.54	-18.45	19 4 14.96	51 50 47.4
19 6 16.4	9.2	7 5.16	6 37.0	34 43.65	-23.85	-0 21.89	+ 9.56	-1.56	-18.40	19 6 47.71	50 48 44.1
19 8 22.7	8.6	9 9.08	8 46.9	57 59.75	-18.12	-0 21.93	+ 11.13	-1.57	-18.50	19 8 51.23	52 25 35.9
19 10 29.7	8.9	11 17.56	10 52.6	12 53.95	-20.98	-0 21.90	+ 9.72	-1.59	-18.40	19 11 0.03	51 10 38.3
19 13 22.9	9.0	14 10.78	13 43.4	22 56.30	-22.58	-0 21.92	+ 10.60	-1.61	-18.45	19 13 53.04	52 0 36.1
19 15 10.1	8.2	15 57.22	15 30.7	22 31.15	-21.83	-0 21.92	+ 10.55	-1.63	-18.45	19 15 39.48	52 1 2.6
19 17 29.6	9.1	18 16.38	17 44.9	41 12.80	-25.55	-0 21.93	+ 11.01	-1.65	-18.50	19 17 58.47	52 42 18.4
19 19 47.7	8.0	20 34.50	20 10.1	4 6.70	-19.97	-0 21.93	+ 11.19	-1.66	-18.45	19 20 16.69	52 19 31.0
19 22 59.6	9.0	23 48.62	23 20.8	13 31.20	-23.34	-0 21.90	+ 9.80	-1.68	-18.35	19 23 31.12	51 10 2.9
19 50 48.2	...	51 36.54	51 11.9	21 45.10	-20.26	-0 21.93	+ 10.49	-1.90	-18.10	19 51 18.94	52 2 1.9
19 54 24.7	8.9	55 15.02	54 48.0	18 3.70	-22.70	-0 21.91	+ 10.66	-1.92	-18.00	19 54 57.67	51 5 42.2
19 56 44.4	9.0	57 34.22	57 8.7	47 28.50	-21.20	-0 21.92	+ 10.15	-1.94	-18.00	19 57 16.76	51 36 19.2
19 59 29.7	8.0	0 20.26	59 50.9	0 35.95	-24.56	-0 21.92	+ 9.56	-1.96	-17.95	20 0 2.87	51 23 8.6
20 4 10.6	8.8	5 0.68	4 33.3	1 43.05	-22.89	-0 21.92	+ 9.76	-1.99	-17.90	20 4 43.33	51 22 4.9
20 6 32.5	9.3	7 23.84	6 54.7	57 18.50	-24.28	-0 21.92	+ 9.89	-2.01	-17.85	20 7 6.49	51 26 28.9
20 8 19.2	8.8	9 10.86	8 47.4	29 20.80	-19.41	-0 21.93	+ 10.80	-2.02	-17.80	20 8 53.43	51 54 33.2
20 14 46.3	9.1	15 37.70	15 7.0	35 2.45	-25.40	-0 21.92	+ 9.89	-2.07	-17.70	20 15 20.35	51 48 46.4
20 14 49.2	9.1	15 40.24	.....	.....	.....	-0 21.92	.....	-2.07	.....	20 15 22.89	.....
20 17 13.1	7.8	18 4.30	17 39.2	23 9.05	-20.69	-0 21.93	+ 10.69	-2.09	-17.65	20 17 46.92	52 0 46.1
20 19 51.0	8.1	20 41.32	20 11.6	16 13.59	-24.96	-0 21.91	+ 9.39	-2.09	-17.55	20 20 24.18	52 7 36.8
20 24 12.2	8.8	25 3.86	24 39.1	7 34.05	-20.77	-0 21.91	+ 9.81	-2.12	-17.45	20 24 46.73	51 16 22.3
20 26 52.0	8.7	27 43.40	27 18.3	51 10.10	-20.43	-0 21.92	+ 9.88	-2.15	-17.40	20 27 26.23	51 32 47.5
20 29 36.5	9.2	30 28.08	30 1.4	15 4.40	-22.42	-0 21.91	+ 9.25	-2.16	-17.35	20 30 11.03	51 8 51.4
20 33 20.1	8.8	34 12.54	33 43.0	15 13.85	-24.78	-0 21.91	+ 9.24	-2.19	-17.25	20 33 55.53	51 8 40.7
20 38 22.7	8.6	39 16.22	38 50.5	49 27.05	-21.85	-0 21.90	+ 9.33	-2.21	-17.10	20 38 59.39	50 34 32.0
20 40 46.1	9.4	41 39.58	41 11.7	38 37.25	-23.63	-0 21.90	+ 9.36	-2.22	-17.05	20 41 22.76	50 45 20.8
20 43 10.9	8.6	44 4.60	43 43.9	5 43.15	-17.70	-0 21.90	+ 8.52	-2.23	-17.00	20 43 47.89	50 18 20.7
20 45 2.7	7.8	45 57.04	45 41.5	5 0.45	-13.25	-0 21.90	+ 8.46	-2.24	-16.95	20 45 40.36	50 19 8.3
20 47 32.7	9.5	48 27.08	48 7.5	34 50.55	-16.58	-0 21.90	+ 9.74	-2.27	-16.90	20 48 10.33	50 49 16.9
20 50 0.5	9.3	50 55.98	50 30.6	22 10.75	-21.31	-0 21.91	+ 9.46	-2.29	-16.80	20 50 39.20	51 1 52.4
20 52 49.8	9.3	53 45.14	53 20.6	49 6.05	-20.83	-0 21.90	+ 9.31	-2.30	-16.75	20 53 28.50	50 34 58.2
20 56 26.2	8.8	57 21.06	56 56.5	31 54.15	-20.78	-0 21.90	+ 9.26	-2.32	-16.70	20 57 4.42	50 52 11.1

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
20 58 40.1	8.2	59 34.88	59 19.4	5 49.20	-13.25	-0 21.90	+ 8.59	-2.32	-16.55	20 59 18.38	50 18 23.5
21 2 1.5	8.5	2 56.98	2 38.7	28 44.85	-15.44	-0 21.90	+ 9.70	-2.36	-16.45	21 2 40.40	50 55 27.8
ZONE 118, SEPTEMBER 9, 1871.											
18 58 42.3	7.0	59 28.50	59 0.7	18 36.85	-22.88	-0 22.02	+10.66	-1.47	-18.65	18 59 10.66	52 4 50.1
19 0 19.5	8.8	1 5.64	0 37.7	27 40.95	-22.51	-0 22.04	+11.42	-1.48	-18.70	19 0 47.58	52 55 47.6
19 2 2.4	9.3	2 49.04	2 22.0	3 21.60	-22.09	-0 22.03	+10.85	-1.49	-18.65	19 2 31.14	52 20 7.5
19 4 28.7	8.5	5 14.70	4 49.3	36 29.40	-21.05	-0 22.03	+11.13	-1.51	-18.70	19 4 56.69	52 47 1.8
19 5 9.0	7.8	5 55.16	5 40.0	39 28.55	-12.32	-0 22.04	+11.60	-1.49	-18.70	19 5 37.17	52 44 12.0
19 5 55.6	8.6	6 43.60	6 24.8	17 52.75	-15.46	-0 22.03	+10.65	-1.52	-18.65	19 6 25.75	52 5 44.0
19 7 57.5	8.7	8 44.10	8 19.8	29 53.20	-19.63	-0 22.05	+11.77	-1.54	-18.70	19 8 26.04	52 53 41.2
19 10 34.4	9.1	11 21.46	10 54.6	57 7.25	-21.96	-0 22.04	+10.82	-1.56	-18.65	19 11 3.52	52 26 24.8
19 12 50.3	8.8	13 38.02	13 8.6	12 17.10	-24.67	-0 22.01	+ 9.49	-1.58	-18.55	19 13 20.41	51 11 11.8
19 13 55.8	7.5	14 43.60	14 15.9	16 21.25	-23.36	-0 22.01	+ 9.28	-1.58	-18.55	19 14 26.01	51 7 9.1
19 14 54.1	8.4	15 40.98	15 14.8	37 10.05	-21.71	-0 22.02	+10.13	-1.60	-18.60	19 15 23.22	51 46 23.0
19 16 10.8	8.9	16 59.84	16 33.5	17 23.40	-22.11	-0 22.01	+ 9.45	-1.60	-18.55	19 16 42.26	51 6 9.1
19 17 53.3	9.3	18 41.52	18 18.2	56 35.05	-19.47	-0 22.02	+ 9.69	-1.62	-18.55	19 18 23.84	51 27 0.9
19 18 46.0	8.0	19 33.64	19 11.5	30 53.85	-18.30	-0 22.03	+10.03	-1.63	-18.55	19 19 15.86	51 52 43.9
19 22 5.3	7.0	22 53.64	22 25.5	47 23.20	-23.88	-0 22.01	+ 8.89	-1.65	-18.50	19 22 36.18	50 36 9.0
19 23 27.8	8.5	24 16.96	23 53.2	47 56.05	-20.23	-0 22.01	+ 9.03	-1.66	-18.50	19 23 59.50	50 35 40.4
19 25 42.5	8.8	26 29.72	26 3.1	30 8.85	-22.15	-0 22.03	+ 9.93	-1.68	-18.45	19 26 11.96	51 53 27.3
19 28 0.2	8.7	28 48.78	28 27.2	35 58.55	-18.28	-0 22.01	+ 8.96	-1.69	-18.45	19 28 31.29	50 47 41.3
19 29 50.7	9.0	30 39.62	30 17.8	37 42.55	-18.47	-0 22.02	+10.27	-1.71	-18.50	19 30 21.91	51 45 58.9
19 31 24.8	8.2	32 13.26	31 49.1	19 47.70	-20.37	-0 22.01	+ 9.78	-1.72	-18.45	19 31 55.73	51 3 51.9
19 32 22.3	8.0	33 10.64	32 48.8	35 37.15	-18.05	-0 22.02	+ 9.95	-1.73	-18.50	19 32 52.93	51 48 5.2
19 33 22.5	8.8	34 11.18	33 54.0	42 41.20	-14.28	-0 22.02	+10.21	-1.74	-18.50	19 33 53.50	51 41 5.5
19 34 45.4	9.1	35 33.44	35 12.6	29 42.40	-17.18	-0 22.03	+10.69	-1.75	-18.45	19 35 15.71	51 54 2.4
19 34 45.4	9.1	35 33.44	35 19.4	29 42.40	-11.56	-0 22.03	+10.76	-1.75	-18.45	19 35 15.71	51 54 8.1
19 36 4.2	9.0	36 52.42	36 26.2	38 9.65	-21.72	-0 22.03	+10.23	-1.76	-18.45	19 36 34.73	51 45 30.6
19 37 57.1	9.2	38 46.54	38 14.8	49 18.45	-26.38	-0 22.03	+10.11	-1.77	-18.45	19 38 28.90	51 34 17.6
19 37 57.1	9.5	38 46.54	38 29.9	49 18.45	-13.81	-0 22.03	+10.30	-1.77	-18.45	19 38 28.90	51 34 30.4
19 39 50.9	8.7	40 40.50	40 14.1	42 3.60	-21.91	-0 22.02	+10.02	-1.79	-18.40	19 40 22.85	51 41 37.5
19 57 59.6	8.3	58 50.82	58 22.7	11 31.35	-24.08	-0 22.01	+ 8.32	-1.91	-18.10	19 58 33.61	50 12 11.8
19 59 3.8	9.4	59 51.58	59 25.6	34 59.75	-22.01	-0 22.02	+ 8.92	-1.92	-18.15	19 59 34.24	50 48 46.4
20 0 37.9	8.9	1 28.52	1 1.6	30 23.80	-22.72	-0 22.02	+ 8.92	-1.93	-18.10	20 1 11.17	50 53 22.2
20 1 41.1	8.5	2 31.80	2 7.9	43 30.05	-20.28	-0 22.02	+ 9.16	-1.94	-18.10	20 2 14.51	50 40 18.9
20 3 32.1	8.0	4 21.84	3 56.7	52 39.50	-20.45	-0 22.05	+10.99	-1.97	-18.10	20 4 4.13	52 31 11.6
20 4 35.0	8.5	5 26.74	5 2.6	30 48.85	-20.36	-0 22.02	+ 9.01	-1.96	-18.05	20 5 9.42	50 53 0.8
20 5 41.5	9.5	6 32.52	6 10.1	4 18.30	-19.15	-0 22.01	+ 8.94	-1.96	-18.00	20 6 15.35	50 19 32.9
20 6 58.5	8.5	7 49.72	7 21.3	36 37.70	-23.52	-0 22.03	+10.02	-1.99	-18.05	20 7 32.22	51 47 10.5
20 8 37.1	8.9	9 28.78	9 0.2	15 14.55	-24.54	-0 22.01	+ 8.05	-1.98	-17.95	20 9 11.66	50 8 31.2
20 23 40.6	9.2	24 33.74	24 16.0	10 24.30	-15.16	-0 22.01	+ 8.28	-2.08	-17.70	20 24 16.74	50 13 35.7
20 24 44.7	8.8	25 36.94	25 11.3	26 38.40	-21.59	-0 22.02	+ 9.18	-2.10	-17.70	20 25 19.80	50 57 16.4
20 25 45.4	8.7	26 37.18	26 10.5	15 27.40	-22.91	-0 22.01	+ 8.09	-2.09	-17.60	20 26 20.22	50 8 25.4
20 26 32.2	8.2	27 25.14	27 4.5	58 53.10	-17.67	-0 22.02	+ 8.98	-2.10	-17.60	20 27 8.12	50 25 6.0
20 27 12.5	6.0	28 4.30	27 55.7	31 0.45	- 7.11	-0 22.04	+10.22	-2.13	-17.65	20 27 46.97	51 53 4.7
20 29 45.5	9.5	30 38.70	30 5.8	21 19.80	-27.70	-0 22.02	+ 9.10	-2.14	-17.55	20 30 21.58	51 2 30.4
20 31 20.6	8.5	32 13.98	31 49.0	12 52.45	-21.44	-0 22.01	+ 8.55	-2.13	-17.50	20 31 57.07	50 11 3.9
20 32 21.1	7.8	33 14.98	32 47.3	56 37.05	-23.61	-0 22.02	+ 8.61	-2.14	-17.50	20 32 58.02	50 27 17.5
20 33 20.1	8.2	34 12.50	33 47.5	15 18.75	-21.00	-0 22.02	+ 9.17	-2.16	-17.50	20 33 55.41	51 8 39.2
20 34 33.7	8.5	35 27.24	35 8.9	37 15.30	-15.50	-0 22.02	+ 9.18	-2.17	-17.45	20 35 10.23	50 46 48.6
20 35 37.6	9.2	36 29.78	36 2.3	42 23.65	-22.32	-0 22.05	+11.07	-2.21	-17.45	20 36 12.36	52 41 35.6
20 36 37.7	8.7	37 29.48	37 5.0	44 1.85	-19.90	-0 22.05	+11.35	-2.21	-17.45	20 37 12.08	52 40 0.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
20 38 22.7	8.0	39 16.24	38 44.4	49 22.15	-27.04	-0 22.02	+ 9.07	-2.19	-17.40	20 38 59.31	50 34 31.1
20 39 20.7	8.5	40 14.68	39 46.7	38 58.60	-23.73	-0 22.02	+ 9.40	-2.20	-17.35	20 39 57.73	50 44 58.6
20 40 46.1	8.7	41 39.48	41 22.0	38 48.10	-14.83	-0 22.02	+ 9.39	-2.20	-17.30	20 41 22.56	50 45 18.5
20 41 47.1	8.8	42 40.92	42 27.2	47 20.10	-11.64	-0 22.02	+ 9.04	-2.21	-17.30	20 42 24.03	50 36 49.6
20 42 49.4	8.7	43 43.88	43 20.7	4 49.05	-19.84	-0 22.01	+ 9.00	-2.21	-17.25	20 43 27.07	50 19 12.7
20 44 19.6	9.0	45 13.72	44 46.0	45 4.65	-23.52	-0 22.02	+ 9.33	-2.23	-17.20	20 44 56.85	50 38 54.2
20 45 6.0	8.5	45 59.54	45 39.8	18 59.10	-16.93	-0 22.02	+ 8.78	-2.22	-17.20	20 45 42.80	50 5 6.0
20 46 37.9	6.8	47 31.26	47 7.9	27 12.35	-19.74	-0 22.03	+ 9.28	-2.24	-17.15	20 47 14.36	50 56 50.9
20 47 47.7	8.7	48 42.32	48 14.1	14 13.60	-24.20	-0 22.02	+ 8.66	-2.24	-17.10	20 48 25.59	50 9 44.9
20 49 21.2	8.8	50 15.26	49 43.8	36 58.25	-26.67	-0 22.03	+ 8.96	-2.26	-17.10	20 49 58.43	50 46 58.5
20 51 39.1	6.5	52 33.96	52 12.2	48 22.95	-18.45	-0 22.03	+ 9.11	-2.27	-17.05	20 52 17.19	50 35 42.8
20 52 49.8	9.0	53 45.00	53 18.0	49 4.35	-22.96	-0 22.03	+ 9.12	-2.28	-17.00	20 53 28.25	50 34 57.3
20 54 16.0	9.5	55 11.74	54 46.8	12 32.25	-21.35	-0 22.02	+ 8.51	-2.28	-16.95	20 54 55.09	50 11 30.8
20 56 26.2	8.5	57 21.12	56 55.3	31 53.00	-21.81	-0 22.03	+ 9.26	-2.30	-16.90	20 57 4.37	50 52 10.9
20 57 40.0	9.2	58 35.22	58 7.5	1 27.65	-23.68	-0 22.02	+ 8.88	-2.30	-16.85	20 58 18.59	50 22 34.4
20 59 52.2	8.2	0 47.42	0 32.8	7 1.40	-12.49	-0 22.02	+ 8.65	-2.31	-16.80	21 0 30.83	50 17 12.2
21 0 34.0	8.3	1 29.10	1 24.2	45 19.50	-4.16	-0 22.03	+ 8.82	-2.32	-16.80	21 1 12.45	50 39 2.7
21 2 1.5	7.8	2 57.04	2 29.2	28 37.75	-23.55	-0 22.03	+ 9.25	-2.33	-16.75	21 2 40.36	50 55 25.9
21 3 36.2	8.5	4 32.12	4 7.0	9 38.50	-21.49	-0 22.02	+ 8.85	-2.33	-16.70	21 4 15.60	50 14 27.3
21 5 15.7	8.7	6 11.26	5 36.1	22 25.50	-29.64	-0 22.03	+ 9.19	-2.36	-16.65	21 5 54.60	51 1 32.9
21 7 7.7	9.0	8 4.06	7 39.3	16 13.35	-21.29	-0 22.02	+ 8.22	-2.35	-16.60	21 7 47.61	50 7 53.0
21 8 46.5	8.9	9 43.16	9 14.7	4 10.90	-24.36	-0 22.02	+ 8.82	-2.36	-16.55	21 9 26.70	50 19 53.4

ZONE 119, SEPTEMBER 18, 1871.

19 18 46.0	7.8	19 34.36	19 12.3	31 43.85	-18.27	-0 23.11	+10.04	-1.35	-19.85	19 19 15.78	51 52 43.5
19 22 5.3	7.5	22 54.42	22 27.9	48 14.65	-22.53	-0 23.11	+ 8.63	-1.38	-19.75	19 22 36.13	50 36 8.2
19 23 27.8	9.2	24 17.84	23 56.0	48 45.95	-18.53	-0 23.11	+ 8.69	-1.39	-19.75	19 23 59.55	50 35 41.4
19 24 52.4	8.8	25 41.02	25 29.4	58 17.60	-9.67	-0 23.11	+ 9.64	-1.40	-19.85	19 25 22.55	51 26 20.0
19 25 42.5	9.0	26 30.42	26 32.3	31 24.00	+ 1.57	-0 23.11	+10.16	-1.41	-19.90	19 26 11.85	51 53 25.5
19 29 50.7	9.2	30 40.36	30 19.3	38 31.80	-17.40	-0 23.11	+ 9.93	-1.44	-19.90	19 30 21.83	51 45 59.9
19 31 24.8	8.4	32 13.94	31 53.0	20 39.55	-17.56	-0 23.11	+ 9.26	-1.46	-19.85	19 31 55.57	51 3 51.8
19 32 22.3	8.2	33 11.38	33 5.4	36 39.85	-4.96	-0 23.11	+10.13	-1.46	-19.90	19 32 52.85	51 48 5.3
19 33 22.5	8.8	34 11.94	34 11.0	43 43.20	-0.75	-0 23.11	+ 9.96	-1.47	-19.90	19 33 53.44	51 41 6.3
19 34 45.4	9.2	35 34.16	35 28.8	30 40.80	-4.45	-0 23.11	+10.25	-1.48	-19.90	19 35 15.62	51 54 5.7
19 36 4.2	9.0	36 53.12	36 45.4	39 13.00	-6.37	-0 23.11	+10.10	-1.50	-19.90	19 36 34.61	51 45 31.9
19 37 57.1	9.2	38 47.02	38 29.8	50 21.05	-14.29	-0 23.11	+ 9.82	-1.51	-19.90	19 38 28.56	51 34 16.2
19 39 50.9	8.8	40 41.28	40 21.0	42 57.30	-16.82	-0 23.11	+ 9.95	-1.53	-19.90	19 40 22.80	51 41 38.2
19 42 19.6	8.0	43 9.24	42 44.5	2 38.85	-20.61	-0 23.11	+ 9.55	-1.55	-19.85	19 42 50.84	51 21 53.3
19 43 44.1	9.2	44 34.30	44 9.4	39 42.05	-20.65	-0 23.11	+ 9.87	-1.56	-19.90	19 44 15.82	51 44 50.8
19 48 44.6	8.4	49 35.38	49 11.5	42 10.35	-20.27	-0 23.11	+ 8.77	-1.60	-19.80	19 49 17.15	50 42 23.6
19 50 7.8	9.0	50 58.42	50 38.5	31 37.10	-16.81	-0 23.11	+ 8.99	-1.61	-19.85	19 50 40.16	50 53 0.7
19 51 20.7	8.7	52 11.80	51 47.9	45 39.15	-20.30	-0 23.11	+ 8.67	-1.62	-19.80	19 51 53.60	50 38 55.3
19 52 46.7	6.5	53 38.22	53 8.7	50 29.25	-25.09	-0 23.11	+ 8.53	-1.63	-19.80	19 53 20.04	50 34 0.7
19 54 14.0	9.1	55 5.86	54 42.0	43 36.45	-20.28	-0 23.11	+ 8.75	-1.65	-19.80	19 54 47.66	50 40 59.0
19 56 32.3	8.2	57 24.18	56 58.7	5 50.40	-21.81	-0 23.11	+ 8.31	-1.66	-19.80	19 57 6.07	50 18 43.8
19 57 59.6	7.8	58 51.60	58 22.1	12 19.10	-25.29	-0 23.11	+ 8.15	-1.67	-19.75	19 58 33.53	50 12 12.0
19 59 3.8	10.0	59 52.40	0 3.0	35 29.08	-41.81	-0 23.11	+ 8.37	-1.69	-19.80	19 59 34.20	50 48 45.9
20 0 37.9	9.2	1 29.32	1 23.5	31 29.40	-4.90	-0 23.10	+ 9.08	-1.70	-19.80	20 1 11.12	50 53 23.7
20 1 41.1	8.8	2 32.86	2 20.4	44 28.55	-10.61	-0 23.10	+ 8.86	-1.71	-19.80	20 2 14.72	50 40 18.9
20 3 32.1	9.0	4 22.56	3 57.0	53 28.10	-20.86	-0 23.10	+10.69	-1.73	-19.90	20 4 4.04	52 31 11.4
20 4 35.0	8.9	5 27.66	5 18.3	31 51.20	-7.95	-0 23.10	+ 9.08	-1.73	-19.75	20 5 9.49	50 53 0.1
20 5 41.5	9.6	6 33.66	6 30.6	5 22.95	-2.65	-0 23.10	+ 8.48	-1.74	-19.75	20 6 15.62	50 19 33.4
20 6 58.5	8.9	7 50.69	7 42.7	37 45.00	-6.63	-0 23.10	+10.05	-1.75	-19.80	20 7 32.36	51 47 9.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
20 8 37.1	9.5	9 29.84	9 23.2	16 23.85	- 5.67	-0 23.10	+ 8.27	-1.76	-19.70	20 9 11.85	50 8 30.2
20 10 6.0	9.1	10 58.30	10 34.5	46 7.45	-20.22	-0 23.10	+ 8.67	-1.77	-19.70	20 10 40.23	50 38 32.8
20 12 4.7	8.8	12 59.06	12 33.0	43 32.50	-22.15	-0 23.10	+ 8.72	-1.79	-19.70	20 12 40.99	50 41 6.5
20 13 27.0	7.5	14 19.30	13 0.6	38 59.60	-15.85	-0 23.10	+ 8.88	-1.80	-19.70	20 14 1.23	50 45 46.2
20 15 0.2	7.7	15 53.70	15 51.7	55 32.34	-17.04	-0 23.10	+ 8.65	-1.81	-19.65	20 15 35.69	50 29 12.6
20 32 21.1	7.3	33 15.84	32 45.4	57 24.45	-25.92	-0 23.10	+ 8.41	-1.94	-19.45	20 32 58.00	50 27 16.5
20 33 20.1	8.6	34 13.38	34 0.3	16 17.95	-11.01	-0 23.10	+ 9.33	-1.96	-19.50	20 33 55.41	51 8 39.0
20 34 33.7	9.0	35 28.28	34 57.5	37 55.80	-26.09	-0 23.10	+ 8.77	-1.97	-19.45	20 35 10.39	50 46 45.9
20 36 37.7	9.1	37 30.54	36 3.0	44 48.10	-22.33	-0 23.10	+ 10.86	-2.00	-19.50	20 37 12.30	52 40 0.0
20 38 22.7	7.9	39 17.10	38 48.6	50 13.40	-24.24	-0 23.10	+ 8.57	-1.99	-19.40	20 38 59.29	50 34 31.1
20 39 20.7	8.8	40 15.62	40 7.4	40 2.90	- 6.95	-0 23.10	+ 8.94	-2.00	-19.40	20 39 57.79	50 44 59.5
20 40 46.1	8.9	41 40.58	41 14.7	39 26.10	-21.95	-0 23.10	+ 8.84	-2.01	-19.35	20 41 22.77	50 45 21.6
20 41 47.1	9.0	42 41.90	42 21.0	48 2.50	-17.77	-0 23.10	+ 8.74	-2.02	-19.35	20 42 24.12	50 36 49.6
20 42 49.4	9.0	43 44.68	43 30.3	5 43.70	-12.40	-0 23.09	+ 8.45	-2.02	-19.30	20 43 26.98	50 19 13.8
20 44 19.6	9.2	45 14.66	44 47.9	45 52.60	-22.76	-0 23.11	+ 8.65	-2.04	-19.30	20 44 56.89	50 38 55.1
20 46 37.9	6.2	47 32.22	47 8.3	27 59.80	-20.17	-0 23.09	+ 9.04	-2.06	-19.25	20 47 14.44	50 56 51.6
20 47 47.7	8.8	48 43.32	48 19.2	15 4.50	-20.69	-0 23.09	+ 8.14	-2.06	-19.20	20 48 25.70	50 9 45.8
20 49 21.2	9.4	50 16.18	49 50.2	37 52.10	-22.02	-0 23.09	+ 8.85	-2.08	-19.20	20 49 58.47	50 46 58.0
20 51 39.1	6.5	52 34.86	52 6.5	49 6.25	-24.15	-0 23.09	+ 8.66	-2.09	-19.15	20 52 17.21	50 35 42.1
20 52 49.8	9.4	53 45.94	53 40.4	50 13.65	- 4.68	-0 23.09	+ 8.77	-2.10	-19.15	20 53 28.31	50 34 54.6
20 54 16.0	9.8	55 12.80	54 59.4	13 28.80	-11.41	-0 23.09	+ 8.36	-2.10	-19.10	20 54 55.26	50 11 32.8
20 56 26.2	8.7	57 21.98	56 58.5	32 43.75	-19.86	-0 23.09	+ 9.00	-2.13	-19.05	20 57 4.34	50 52 10.6
20 57 40.0	9.5	58 36.23	58 31.0	2 37.65	- 4.61	-0 23.09	+ 8.58	-2.13	-19.00	20 58 18.70	50 22 31.9
20 58 40.1	8.5	59 35.72	59 18.3	6 36.25	-14.89	-0 23.09	+ 8.43	-2.14	-19.00	20 59 18.21	50 18 23.1
20 59 52.2	7.8	0 48.26	0 18.6	7 34.05	-25.33	-0 23.09	+ 8.24	-2.14	-19.00	21 0 30.77	50 17 15.0
21 2 1.5	7.8	2 58.00	2 29.9	29 25.00	-23.73	-0 23.09	+ 9.00	-2.17	-18.95	21 2 40.42	50 55 26.9
21 3 36.2	9.2	4 33.12	4 2.6	10 22.55	-26.14	-0 23.09	+ 8.15	-2.17	-18.90	21 4 15.69	50 14 26.6
21 5 15.7	9.2	6 12.28	5 44.3	23 19.75	-23.39	-0 23.09	+ 9.10	-2.19	-18.85	21 5 54.73	51 1 33.5
21 7 7.7	9.6	8 5.12	7 41.2	17 1.50	-20.52	-0 23.09	+ 8.16	-2.19	-18.80	21 7 47.76	50 7 54.2
21 8 46.5	9.0	9 43.84	9 10.4	4 54.07	-28.39	-0 23.09	+ 8.26	-2.21	-18.80	21 9 26.46	50 19 54.3
ZONE 120, SEPTEMBER 21, 1871.											
19 24 52.4	8.8	25 41.22	25 11.7	57 17.80	-24.62	-0 23.46	+ 9.51	-1.31	-20.20	19 25 22.49	51 26 20.0
19 25 42.5	9.0	26 30.68	26 28.8	30 34.65	- 1.57	-0 23.45	+ 10.10	-1.31	-20.25	19 26 11.87	51 53 27.0
19 28 0.2	9.2	28 49.84	28 22.6	36 0.15	-23.01	-0 23.46	+ 8.82	-1.34	-20.15	19 28 31.26	50 47 39.7
19 29 50.7	9.2	30 40.68	30 19.3	37 48.15	-17.74	-0 23.45	+ 9.85	-1.35	-20.25	19 30 21.90	51 45 58.5
19 31 24.8	8.5	32 14.28	31 49.6	19 51.90	-20.78	-0 23.46	+ 9.03	-1.37	-20.20	19 31 55.65	51 3 51.4
19 32 22.3	8.2	33 11.58	32 4.2	35 54.45	- 6.14	-0 23.45	+ 9.97	-1.37	-20.30	19 32 52.80	51 48 4.6
19 34 45.4	9.5	35 34.56	35 26.4	29 52.25	- 6.77	-0 23.45	+ 10.09	-1.39	-20.30	19 35 15.77	51 54 7.1
19 36 4.2	9.0	36 53.46	36 49.6	38 34.60	- 3.23	-0 23.45	+ 9.96	-1.40	-20.30	19 36 34.71	51 45 28.6
19 37 57.1	9.2	38 47.34	38 29.0	49 37.50	-15.23	-0 23.45	+ 9.64	-1.42	-20.30	19 38 28.63	51 34 14.0
19 39 50.9	9.0	40 41.54	40 19.5	42 12.25	-18.26	-0 23.45	+ 9.81	-1.44	-20.30	19 40 22.81	51 41 36.9
19 42 19.6	7.8	43 9.42	42 49.8	1 59.80	-16.39	-0 23.46	+ 9.46	-1.46	-20.30	19 42 50.76	51 21 51.7
19 43 44.1	9.0	44 34.54	.....	.....	.....	-0 23.45	.....	-1.47	.....	19 44 15.81	.....
19 48 44.6	8.4	49 35.66	49 11.8	41 25.05	-20.27	-0 23.46	+ 8.74	-1.51	-20.25	19 49 17.17	50 42 24.1
19 50 7.8	9.0	50 58.62	50 31.8	30 45.55	-22.67	-0 23.46	+ 8.75	-1.53	-20.30	19 50 40.09	50 53 1.4
19 51 20.7	8.4	52 12.10	51 48.1	44 53.60	-20.37	-0 23.46	+ 8.61	-1.54	-20.30	19 51 53.63	50 38 55.9
19 52 46.7	6.5	53 38.50	53 13.2	49 46.85	-21.51	-0 23.45	+ 8.49	-1.55	-20.25	19 53 20.06	50 34 1.9
19 54 14.0	8.9	55 6.04	54 36.2	42 47.75	-25.28	-0 23.45	+ 8.63	-1.56	-20.25	19 54 47.59	50 40 57.8
19 56 32.3	8.4	57 24.46	57 1.8	5 8.85	-19.41	-0 23.45	+ 8.26	-1.58	-20.25	19 57 6.09	50 18 42.9
19 57 59.6	8.1	58 51.78	58 27.1	11 39.65	-21.17	-0 23.45	+ 8.19	-1.59	-20.25	19 58 33.45	50 12 10.7
19 59 3.8	9.6	59 52.75	59 40.4	35 16.65	-10.41	-0 23.45	+ 9.00	-1.60	-20.25	19 59 34.30	50 48 45.6
20 0 37.9	9.0	1 29.46	1 0.2	30 26.75	-24.76	-0 23.45	+ 8.86	-1.61	-20.30	20 1 11.00	50 53 21.5

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
20 1 41.1	8.4	2 32.94	2 15.1	43 40.35	-15.11	-0 23.45	+ 8.73	-1.62	-20.25	20 2 14.54	50 40 17.7
20 3 32.1	8.3	4 22.82	4 0.8	52 46.95	-17.93	-0 23.44	+10.66	-1.64	-20.35	20 4 4.05	52 31 10.7
20 4 35.0	8.8	5 27.72	5 3.7	30 54.35	-20.28	-0 23.45	+ 8.97	-1.65	-20.30	20 5 9.32	50 52 59.7
20 5 41.5	10.0	6 33.70	6 28.4	4 37.70	- 4.53	-0 23.45	+ 8.39	-1.65	-20.25	20 6 15.40	50 19 31.9
20 6 58.5	8.3	7 50.90	7 28.9	36 48.80	-18.23	-0 23.44	+ 9.86	-1.67	-20.30	20 7 32.31	51 47 8.8
20 8 37.1	9.4	9 29.98	9 4.1	15 22.65	-22.23	-0 23.45	+ 8.09	-1.68	-20.20	20 9 11.72	50 8 29.8
20 12 4.7	8.5	12 59.26	12 33.3	42 47.90	-22.06	-0 23.45	+ 8.70	-1.71	-20.25	20 12 40.92	50 41 6.3
20 13 27.0	7.5	14 19.48	14 2.2	38 15.50	-16.60	-0 23.45	+ 8.82	-1.72	-20.25	20 14 1.14	50 45 44.7
20 15 0.2	8.1	15 53.86	15 26.1	54 40.95	-23.68	-0 23.45	+ 8.40	-1.73	-20.20	20 15 35.58	50 29 12.2
20 15 52.8	9.0	16 45.58	16 23.8	22 5.00	-18.36	-0 23.45	+ 9.11	-1.74	-20.25	20 16 27.20	51 1 54.4
20 17 19.5	8.9	18 13.68	17 49.5	58 58.45	-20.64	-0 23.45	+ 8.40	-1.75	-20.20	20 17 55.43	50 24 58.5
20 18 24.8	9.0	19 21.00	19 5.8	10 22.25	-13.02	-0 23.45	+ 8.33	-1.76	-20.15	20 19 2.80	50 13 42.6
20 20 35.3	8.5	21 29.62	21 3.9	12 2.85	-22.03	-0 23.45	+ 8.18	-1.78	-20.15	20 21 11.44	50 11 53.5
20 21 24.5	9.3	22 18.32	22 10.8	15 32.60	- 6.44	-0 23.45	+ 8.28	-1.78	-20.15	20 22 0.16	50 8 39.6
20 22 19.0	9.0	23 12.90	23 8.5	18 33.20	- 3.78	-0 23.45	+ 8.20	-1.79	-20.15	20 22 54.76	50 5 41.9
20 23 40.6	9.0	24 34.82	24 10.2	10 22.30	-21.07	-0 23.45	+ 8.24	-1.80	-20.10	20 24 16.66	50 13 35.9
20 24 44.7	8.8	25 37.92	25 20.2	26 47.80	-14.93	-0 23.45	+ 9.11	-1.81	-20.15	20 25 19.64	50 57 17.7
20 25 45.4	8.8	26 38.26	26 13.5	15 33.05	-21.28	-0 23.45	+ 8.13	-1.82	-20.10	20 26 20.13	50 8 25.4
20 26 32.2	8.5	27 26.26	27 13.4	59 4.65	-11.01	-0 23.45	+ 8.49	-1.82	-20.10	20 27 8.09	50 25 4.7
20 27 38.2	8.7	28 31.02	28 12.1	31 2.15	-15.62	-0 23.44	+10.10	-1.84	-20.20	20 28 12.59	51 52 58.4
20 29 45.5	9.4	30 40.10	30 23.9	21 37.30	-13.64	-0 23.45	+ 9.19	-1.85	-20.15	20 30 21.84	51 2 31.0
20 31 20.6	8.2	32 15.04	31 46.6	12 53.80	-24.35	-0 23.45	+ 8.12	-1.86	-20.05	20 31 56.96	50 11 3.2
20 32 21.1	7.7	33 16.04	32 58.4	56 50.75	-15.00	-0 23.45	+ 8.53	-1.87	-20.05	20 32 57.92	50 27 16.3
20 33 20.1	8.3	34 13.56	33 51.8	15 24.60	-18.31	-0 23.45	+ 9.28	-1.88	-20.10	20 33 55.32	51 8 40.1
20 34 33.7	8.8	35 28.40	35 4.3	37 16.05	-20.41	-0 23.45	+ 8.87	-1.89	-20.05	20 35 10.24	50 46 46.6
20 36 37.7	8.7	37 30.72	37 8.8	44 8.35	-17.71	-0 23.44	+10.83	-1.92	-20.10	20 37 12.22	52 39 59.4
20 38 22.7	8.0	39 17.28	38 50.1	49 29.65	-23.13	-0 23.45	+ 8.56	-1.92	-20.00	20 38 59.19	50 34 31.0
20 39 20.7	8.7	40 15.78	39 52.5	39 4.15	-19.73	-0 23.45	+ 8.82	-1.93	-20.00	20 39 57.67	50 45 0.4
20 40 46.1	9.1	41 40.74	41 17.0	38 44.75	-20.07	-0 23.45	+ 8.80	-1.94	-19.95	20 41 22.65	50 45 19.9
20 41 47.1	9.0	42 42.12	42 35.0	47 29.00	- 6.03	-0 23.44	+ 8.79	-1.95	-19.95	20 42 24.07	50 36 50.0
20 42 49.4	8.8	43 45.02	43 24.3	4 54.05	-17.69	-0 23.44	+ 8.30	-1.95	-19.90	20 43 27.04	50 19 13.1
20 46 37.9	6.8	47 32.42	47 5.0	27 12.40	-23.12	-0 23.44	+ 9.00	-1.99	-19.90	20 47 14.36	50 56 51.0
20 47 47.7	8.8	48 43.44	48 16.1	14 17.00	-23.42	-0 23.44	+ 8.07	-1.99	-19.85	20 48 25.54	50 9 45.5
20 49 21.2	9.0	50 16.52	49 51.3	37 7.90	-21.33	-0 23.44	+ 8.86	-2.01	-19.85	20 49 58.53	50 46 57.9
20 54 16.0	9.6	55 12.94	55 2.5	12 48.70	- 8.92	-0 23.44	+ 8.28	-2.04	-19.75	20 54 55.11	50 11 30.3
20 56 26.2	8.8	57 22.20	56 55.6	31 56.55	-22.48	-0 23.44	+ 8.89	-2.06	-19.75	20 57 4.28	50 52 10.1
20 57 40.0	9.4	58 36.40	58 18.6	1 42.75	-15.20	-0 23.44	+ 8.53	-2.06	-19.70	20 58 18.59	50 22 31.1
20 58 40.1	8.2	59 35.84	59 16.6	5 48.45	-16.42	-0 23.44	+ 8.42	-2.07	-19.65	20 59 18.05	50 18 24.4
20 59 52.2	8.0	0 48.60	0 25.7	6 56.70	-19.60	-0 23.44	+ 8.35	-2.08	-19.65	21 0 30.82	50 17 13.2
21 0 34.0	8.5	1 30.44	1 27.9	45 24.70	- 2.12	-0 23.44	+ 8.88	-2.09	-19.65	21 1 12.61	50 39 3.4
21 2 1.5	8.2	2 58.22	2 32.2	28 42.35	-21.94	-0 23.44	+ 8.96	-2.11	-19.65	21 2 40.35	50 55 26.3
21 3 36.2	9.2	4 33.30	4 10.1	9 45.50	-19.87	-0 23.44	+ 8.19	-2.11	-19.55	21 4 15.58	50 14 25.0
21 5 15.7	8.9	6 12.32	5 48.3	22 36.40	-20.21	-0 23.44	+ 9.12	-2.13	-19.55	21 5 54.48	51 1 35.1
21 7 7.7	9.3	8 5.26	7 50.2	16 23.90	-12.96	-0 23.44	+ 8.24	-2.13	-19.50	21 7 47.61	50 7 54.4
ZONE 121, SEPTEMBER 23, 1871.											
19 45 32.5	8.1	46 20.88	45 54.7	57 33.85	-20.90	-0 23.47	+11.14	-1.42	-20.75	19 46 1.82	53 27 7.4
19 46 34.7	9.2	47 21.68	47 11.3	25 52.80	- 8.19	-0 23.47	+11.97	-1.43	-20.80	19 47 2.50	53 59 2.2
19 47 25.5	9.2	48 13.94	48 2.1	55 16.60	- 9.40	-0 23.47	+11.42	-1.44	-20.75	19 47 54.88	53 29 39.9
19 48 15.2	9.1	49 3.34	48 50.2	58 51.10	-10.45	-0 23.47	+11.18	-1.45	-20.75	19 48 44.29	53 26 1.4
19 52 56.7	8.3	53 45.26	53 15.4	57 43.05	-23.85	-0 23.47	+11.07	-1.49	-20.75	19 53 26.24	53 26 57.4
19 54 29.2	9.1	55 17.78	54 55.2	49 38.65	-17.97	-0 23.47	+11.26	-1.50	-20.75	19 54 58.74	53 35 8.4
19 55 32.4	8.8	56 22.58	55 57.9	11 50.95	-19.81	-0 23.47	+11.92	-1.51	-20.70	19 56 3.63	53 12 55.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
19 57 14.7	9.0	58 2.92	57 34.4	32 49.20	-22.51	-0 23.47	+11.55	-1.53	-20.75	19 57 43.83	53 51 54.4
19 58 5.7	8.9	58 54.18	58 33.2	44 9.05	-16.66	-0 23.47	+11.36	-1.53	-20.75	19 58 35.12	53 40 40.5
19 59 6.0	8.5	59 54.70	59 30.2	52 13.60	-19.49	-0 23.47	+11.25	-1.54	-20.75	19 59 35.70	53 32 33.3
20 0 4.7	8.5	0 53.96	0 28.5	19 51.05	-20.51	-0 23.47	+10.67	-1.55	-20.70	20 0 35.07	53 4 54.6
20 2 33.2	9.2	3 23.58	2 52.9	50 33.55	-24.42	-0 23.47	+11.27	-1.57	-20.75	20 3 4.60	53 34 7.5
20 4 15.4	9.5	5 4.82	4 36.4	47 14.00	-22.55	-0 23.47	+11.29	-1.59	-20.75	20 4 45.84	53 37 31.4
20 5 35.8	8.1	6 24.56	5 50.4	47 15.91	-26.57	-0 23.48	+12.27	-1.61	-20.80	20 6 5.34	54 37 26.8
20 6 28.5	8.2	7 18.03	6 54.3	50 38.65	-15.68	-0 23.48	+12.50	-1.61	-20.80	20 6 58.84	54 34 15.4
20 7 32.5	9.0	8 21.60	7 52.0	34 0.10	-23.39	-0 23.48	+11.46	-1.62	-20.75	20 8 2.58	53 50 45.6
20 8 42.7	8.2	9 32.62	9 1.8	53 2.40	-24.52	-0 23.48	+11.12	-1.63	-20.75	20 9 13.68	53 31 42.2
20 9 50.7	5.0	10 40.74	10 16.5	7 58.05	-19.38	-0 23.48	+10.94	-1.64	-20.70	20 10 21.87	53 16 51.9
20 11 31.6	7.7	12 20.26	11 45.3	38 48.20	-27.70	-0 23.48	+11.37	-1.66	-20.70	20 12 1.28	53 45 54.4
20 14 2.6	8.8	14 53.28	14 26.1	17 50.05	-21.86	-0 23.48	+10.72	-1.68	-20.70	20 14 34.47	53 6 58.5
20 16 40.3	6.2	17 30.22	17 0.8	12 50.20	-23.59	-0 23.48	+10.80	-1.70	-20.70	20 17 11.42	53 11 57.4
20 18 28.6	9.2	19 19.78	18 49.5	10 48.30	-24.29	-0 23.48	+10.89	-1.72	-20.65	20 19 0.99	53 13 59.3
20 20 6.4	8.8	20 56.20	20 29.8	29 0.10	-20.82	-0 23.48	+11.60	-1.74	-20.70	20 20 37.26	53 55 52.0
20 22 29.6	8.1	23 20.76	23 11.8	48 11.55	-7.15	-0 23.48	+11.45	-1.75	-20.65	20 23 1.93	53 36 54.8
20 23 17.9	8.6	24 9.06	24 4.2	59 32.50	-3.91	-0 23.49	+11.18	-1.76	-20.65	20 23 50.26	53 25 37.2
20 25 19.3	8.8	26 11.14	25 42.9	16 57.95	-22.66	-0 23.49	+10.74	-1.77	-20.60	20 25 52.43	53 7 53.1
20 25 45.1	8.4	26 35.84	26 57.9	43 8.10	+17.53	-0 23.49	+11.36	-1.78	-20.65	20 26 17.02	53 42 23.8
20 27 32.1	9.6	28 23.16	27 58.2	36 22.10	-19.77	-0 23.49	+11.61	-1.80	-20.65	20 28 4.32	53 48 33.3
20 28 23.0	7.5	29 13.42	28 52.0	41 7.10	-16.95	-0 23.49	+11.54	-1.81	-20.70	20 28 54.60	53 43 51.2
20 29 17.9	9.6	30 10.04	30 5.1	42 47.50	-3.89	-0 23.49	+11.58	-1.81	-20.65	20 29 51.25	53 42 24.2
20 30 49.9	8.8	31 43.10	31 21.0	1 1.35	-17.65	-0 23.49	+11.20	-1.82	-20.60	20 31 24.39	53 23 56.7
20 31 48.5	9.0	32 38.04	32 22.3	29 55.00	-12.38	-0 23.49	+11.67	-1.84	-20.60	20 32 19.22	53 55 9.1
20 33 30.1	9.0	34 21.98	33 57.0	20 51.55	-19.65	-0 23.49	+11.82	-1.85	-20.60	20 34 3.16	54 4 5.9
20 35 20.0	9.0	36 13.26	35 42.6	1 53.60	-24.52	-0 23.49	+11.02	-1.86	-20.55	20 35 54.61	53 22 58.7
20 36 15.3	9.0	37 6.90	36 41.6	24 25.15	-19.91	-0 23.49	+11.70	-1.88	-20.55	20 36 48.11	54 0 32.7
20 37 24.4	8.5	38 16.22	37 51.5	39 10.65	-19.55	-0 23.49	+11.42	-1.89	-20.55	20 37 57.50	53 45 47.6
20 38 33.1	9.0	39 26.84	39 1.6	46 46.90	-20.01	-0 23.50	+11.36	-1.90	-20.50	20 39 8.15	53 38 11.2
ZONE 122, SEPTEMBER 28, 1871.											
19 50 40.5	8.3	51 10.96	50 49.6	26 49.30	-16.86	-0 5.88	+11.94	-1.29	-21.40	19 51 9.57	53 57 57.8
19 51 55.1	8.2	52 26.13	.....	.....	.....	-0 5.88	.....	-1.31	.....	19 52 24.72	.....
19 52 56.7	7.5	53 27.48	53 11.0	57 56.00	-13.16	-0 5.88	+11.32	-1.32	-21.40	19 53 26.22	53 26 54.8
19 54 29.2	8.8	54 59.90	54 30.7	49 34.60	-23.30	-0 5.88	+11.21	-1.34	-21.40	19 54 58.61	53 35 6.5
19 55 32.4	8.0	56 4.74	55 36.7	11 47.65	-22.45	-0 5.88	+10.99	-1.35	-21.40	19 56 3.54	53 12 54.3
19 57 14.7	8.7	57 45.10	57 18.8	32 52.85	-20.77	-0 5.89	+11.69	-1.36	-21.45	19 57 43.76	53 51 52.0
19 58 5.7	8.5	58 36.44	58 13.9	44 7.65	-17.85	-0 5.89	+11.43	-1.36	-21.40	19 58 35.13	53 40 40.2
19 59 6.0	8.4	59 37.00	59 4.8	52 7.05	-25.62	-0 5.89	+11.25	-1.38	-21.40	19 59 35.74	53 32 33.1
20 0 4.7	8.0	0 36.30	0 8.6	19 50.30	-22.28	-0 5.89	+10.68	-1.39	-21.40	20 0 35.15	53 4 53.0
20 2 33.2	8.8	3 5.92	2 37.2	50 36.15	-22.83	-0 5.89	+11.58	-1.41	-21.45	20 3 4.68	53 34 8.1
20 4 15.4	8.9	4 46.98	4 16.6	47 11.20	-24.14	-0 5.89	+11.40	-1.43	-21.45	20 4 45.74	53 37 32.1
20 5 35.8	8.2	6 6.94	5 32.1	47 14.95	-26.98	-0 5.89	+12.41	-1.44	-21.55	20 6 5.48	54 37 26.8
20 6 28.5	7.8	7 0.26	6 36.6	50 38.10	-18.40	-0 5.89	+12.63	-1.45	-21.55	20 6 58.82	54 34 12.7
20 7 32.5	9.0	8 3.76	7 37.9	34 2.65	-20.46	-0 5.89	+11.58	-1.46	-21.50	20 8 2.49	53 50 45.5
20 8 42.7	8.0	9 14.96	8 49.8	53 4.50	-20.06	-0 5.89	+11.30	-1.47	-21.45	20 9 13.77	53 31 44.1
20 9 50.7	7.8	10 22.98	9 58.8	7 57.55	-15.39	-0 5.90	+11.05	-1.48	-21.45	20 10 21.85	53 16 55.8
20 11 31.6	7.0	12 2.54	11 27.0	38 48.20	-28.10	-0 5.90	+11.42	-1.50	-21.50	20 12 1.30	53 45 53.3
20 14 2.6	8.8	14 35.56	.....	.....	.....	-0 5.90	.....	-1.52	.....	20 14 34.49	.....
20 16 40.3	5.5	17 12.50	.....	.....	.....	-0 5.90	.....	-1.55	.....	20 17 11.43	.....
20 18 28.6	9.0	19 2.06	.....	.....	.....	-0 5.91	.....	-1.57	.....	20 19 0.99	.....
20 20 6.4	8.8	20 38.54	20 6.9	28 55.30	-24.92	-0 5.91	+11.62	-1.58	-21.50	20 20 37.33	53 55 52.0

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
20 22 29.6	8.0	23 3.06	22 32.9	47 23.68	-23.99	-0 5.91	+11.39	-1.60	-21.50	20 23 1.95	53 36 55.8
20 23 17.9	8.5	23 51.42	23 38.5	59 24.90	-10.30	-0 5.91	+11.24	-1.61	-21.50	20 23 50.35	53 25 37.6
20 25 19.3	8.5	25 53.46	25 20.3	16 54.00	-26.68	-0 5.91	+10.84	-1.62	-21.45	20 25 52.48	53 7 52.4
20 27 32.1	9.5	28 5.32	27 35.5	36 16.85	-23.57	-0 5.91	+11.73	-1.63	-21.50	20 28 4.23	53 48 34.1
20 28 23.0	7.5	28 55.60	28 40.5	41 11.90	-11.96	-0 5.91	+11.81	-1.67	-21.50	20 28 54.50	53 43 50.9
20 29 17.9	9.4	29 52.36	29 40.6	42 40.65	-9.36	-0 5.91	+11.69	-1.67	-21.50	20 29 51.29	53 42 25.0
20 30 49.9	9.1	31 25.44	30 53.4	0 53.20	-25.55	-0 5.92	+11.27	-1.68	-21.45	20 31 24.44	53 23 56.2
20 31 48.5	8.7	32 20.36	32 2.6	29 53.25	-14.04	-0 5.92	+11.75	-1.69	-21.50	20 32 19.26	53 55 8.4
20 33 30.1	9.3	34 4.34	33 37.1	20 50.90	-21.38	-0 5.92	+12.08	-1.71	-21.50	20 34 3.23	54 4 4.2
20 35 20.0	9.1	35 55.58	35 26.0	1 53.15	-23.65	-0 5.92	+11.22	-1.72	-21.45	20 35 54.64	53 22 59.4
20 36 15.3	9.0	36 49.16	36 29.6	24 26.75	-15.42	-0 5.92	+11.88	-1.73	-21.45	20 36 48.09	54 0 35.0
20 37 24.4	8.3	37 58.48	37 32.0	39 7.15	-20.98	-0 5.92	+11.44	-1.74	-21.45	20 37 57.48	53 45 48.8
20 38 33.1	9.0	39 9.02	38 42.8	46 45.25	-20.81	-0 5.92	+11.55	-1.75	-21.45	20 39 8.06	53 38 11.3
21 27 19.0	...	27 58.86	...	...	...	-0 5.97	...	-2.19	...	21 27 58.54	...
21 28 19.4	8.5	28 59.70	28 42.3	51 42.45	-13.84	-0 5.97	+11.59	-2.19	-20.75	21 28 59.39	53 33 34.0
21 29 20.9	9.2	30 1.10	29 44.3	4 5.75	-13.43	-0 5.97	+11.20	-2.20	-20.70	21 30 0.84	53 21 10.9
21 30 42.7	8.2	31 22.72	30 54.1	18 5.70	-23.02	-0 5.97	+10.88	-2.21	-20.70	21 31 22.52	53 7 1.3
21 32 12.3	7.8	32 51.88	32 19.1	20 30.70	-25.78	-0 5.97	+12.09	-2.24	-20.65	21 32 51.53	54 4 35.2
21 33 40.5	9.3	34 22.38	33 55.2	15 37.05	-21.85	-0 5.97	+11.11	-2.23	-20.60	21 34 22.23	53 9 32.1
21 34 40.3	8.7	35 20.96	34 58.5	21 37.10	-17.69	-0 5.97	+12.17	-2.26	-20.60	21 35 20.66	54 3 37.5
21 35 45.8	8.5	36 28.82	35 1.7	39 43.60	-21.46	-0 5.98	+11.54	-2.26	-20.60	21 36 28.59	53 45 26.8
21 37 16.4	9.0	37 57.10	37 26.5	55 15.05	-24.39	-0 5.98	+11.51	-2.27	-20.55	21 37 56.94	53 29 52.8
21 38 3.6	7.8	38 44.50	38 28.9	25 53.25	-12.26	-0 5.98	+12.21	-2.28	-20.55	21 38 44.27	53 59 27.6
21 39 8.1	7.0	39 48.86	39 23.4	42 35.85	-20.22	-0 5.98	+11.67	-2.29	-20.50	21 39 48.69	53 42 36.7
21 40 17.4	8.9	40 58.06	40 35.6	29 15.10	-17.74	-0 5.98	+11.83	-2.30	-20.45	21 40 57.88	53 56 0.4
21 41 28.7	9.5	42 10.46	41 43.3	52 43.95	-21.65	-0 5.98	+11.40	-2.31	-20.40	21 42 10.36	53 32 27.5
21 42 35.6	9.3	43 16.84	42 54.7	22 52.30	-17.38	-0 5.98	+12.04	-2.33	-20.40	21 43 16.67	54 2 24.3
21 44 24.1	9.2	45 5.14	44 39.6	25 52.25	-20.08	-0 5.98	+12.12	-2.34	-20.35	21 45 5.02	53 59 22.1
21 47 20.8	8.8	48 3.00	47 29.6	17 38.00	-26.85	-0 5.98	+10.86	-2.34	-20.25	21 48 3.09	53 7 29.0
21 48 15.8	6.8	48 57.14	48 37.2	0 46.85	-15.89	-0 5.99	+11.51	-2.36	-20.25	21 48 57.18	53 24 32.0
21 49 47.8	9.0	50 30.00	50 4.4	51 10.80	-20.36	-0 5.99	+11.58	-2.37	-20.20	21 50 30.05	53 34 3.9
21 51 24.2	9.0	52 6.50	51 32.5	24 7.60	-26.75	-0 5.99	+11.78	-2.40	-20.15	21 52 6.49	54 1 1.3
21 53 21.3	8.8	54 4.72	53 32.0	31 54.20	-25.81	-0 5.99	+11.84	-2.41	-20.10	21 54 4.78	53 53 16.1
21 54 30.0	9.0	55 12.04	54 45.8	50 19.45	-20.83	-0 5.99	+11.66	-2.41	-20.05	21 55 12.17	53 34 55.9
21 55 44.7	...	56 27.50	55 58.6	51 39.55	-22.99	-0 5.99	+11.52	-2.42	-20.00	21 56 27.66	53 33 33.8
21 56 23.8	8.2	57 6.72	56 54.1	13 42.25	-10.11	-0 5.99	+11.15	-2.42	-20.00	21 57 6.95	53 11 43.7
21 58 10.3	7.5	58 52.96	58 22.9	8 43.00	-23.54	-0 6.00	+12.16	-2.46	-19.95	21 58 53.04	54 16 30.9
21 59 28.2	8.8	0 10.82	59 38.9	5 39.90	-25.52	-0 6.00	+11.28	-2.45	-19.90	22 0 11.07	53 19 31.4
22 1 21.3	9.0	2 3.68	1 39.1	30 42.20	-19.41	-0 6.00	+12.07	-2.47	-19.85	22 2 3.89	53 54 36.4
22 2 50.3	9.0	3 33.88	3 9.0	21 12.40	-19.57	-0 6.00	+12.20	-2.51	-19.80	22 3 34.07	54 4 6.5
22 4 1.9	9.0	4 45.64	4 20.8	51 31.45	-19.72	-0 6.00	+11.60	-2.48	-19.75	22 4 45.96	53 33 46.9
22 5 29.9	9.1	6 13.70	5 43.2	19 40.80	-23.96	-0 6.00	+11.88	-2.51	-19.70	22 6 13.96	54 5 33.9
22 6 55.1	9.2	7 39.76	7 9.8	9 36.85	-24.04	-0 6.00	+10.97	-2.50	-19.65	22 7 40.17	53 15 37.2
22 7 55.5	8.9	8 39.30	8 11.3	7 51.00	-22.42	-0 6.00	+11.13	-2.51	-19.65	22 8 39.73	53 17 24.9
22 10 49.5	...	11 33.94	11 2.5	0 31.85	-25.06	-0 6.01	+11.40	-2.54	-19.55	22 11 34.39	53 24 42.3
22 11 40.4	8.7	12 25.34	12 5.2	32 22.60	-15.87	-0 6.01	+11.95	-2.55	-19.50	22 12 25.75	53 53 1.5
22 12 55.1	8.5	13 39.74	13 9.5	33 24.65	-23.86	-0 6.01	+11.74	-2.56	-19.45	22 13 40.18	53 51 51.5
22 15 2.4	8.2	15 47.84	15 21.4	14 8.80	-21.19	-0 6.01	+10.95	-2.56	-19.40	22 15 48.42	53 11 9.6
22 16 24.1	8.5	17 9.40	16 40.4	54 43.65	-23.10	-0 6.01	+11.28	-2.58	-19.35	22 17 9.96	53 30 33.4
22 17 50.6	8.5	18 36.34	18 3.4	43 36.45	-26.10	-0 6.01	+11.52	-2.59	-19.30	22 18 36.91	53 41 38.1
ZONE 123, OCTOBER 5, 1871.											
20 5 35.8	8.6	6 7.06	5 41.2	46 35.00	-20.08	-0 6.29	+12.33	-1.20	-22.35	20 6 5.44	54 37 28.0

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	° ' "	"	m s	"	s	"	h m s	° ' "
20 6 28.5	8.4	7 0.44	6 35.2	49 52.35	-19.56	-0 6.29	+11.96	-1.21	-22.35	20 6 58.84	54 34 11.1
20 7 32.5	9.1	8 3.88	7 50.5	33 25.95	-10.58	-0 6.30	+11.47	-1.22	-22.30	20 8 2.44	53 50 46.4
20 8 42.7	8.5	9 15.04	8 47.0	52 16.75	-22.29	-0 6.30	+11.04	-1.24	-22.30	20 9 13.67	53 31 43.8
20 9 50.7	8.3	10 23.16	9 1.9	7 13.10	-17.05	-0 6.30	+10.91	-1.25	-22.30	20 10 21.86	53 16 52.9
20 11 31.6	8.2	12 2.86	11 32.6	38 5.75	-23.98	-0 6.30	+11.20	-1.26	-22.35	20 12 1.46	53 45 54.0
20 14 2.6	9.0	14 35.68	14 10.5	17 4.65	-20.26	-0 6.30	+10.64	-1.29	-22.35	20 14 34.44	53 6 59.0
20 16 40.3	6.0	17 12.64	16 52.8	12 11.05	-15.88	-0 6.30	+10.83	-1.32	-22.40	20 17 11.40	53 11 57.9
20 18 28.6	9.5	19 2.24	18 39.4	10 7.50	-18.28	-0 6.30	+11.00	-1.34	-22.40	20 19 1.01	53 13 59.8
20 20 6.4	9.8	20 38.64	20 9.4	28 9.95	-23.01	-0 6.30	+11.41	-1.35	-22.45	20 20 37.27	53 55 53.4
20 22 29.6	8.5	23 3.22	22 34.7	47 8.15	-22.63	-0 6.30	+11.17	-1.38	-22.45	20 23 1.94	53 36 56.0
20 23 17.9	8.9	23 51.48	23 40.6	58 39.70	-8.70	-0 6.30	+10.97	-1.39	-22.45	20 23 50.24	53 25 38.4
20 25 19.3	8.9	25 53.54	25 23.6	16 10.45	-24.01	-0 6.30	+10.66	-1.41	-22.45	20 25 52.38	53 7 52.6
20 26 14.1	9.8	26 48.42	26 30.8	43 38.00	-13.96	-0 6.30	+11.24	-1.41	-22.50	20 26 47.16	53 40 35.9
20 27 32.1	9.4	28 5.58	27 47.7	35 40.25	-14.15	-0 6.30	+11.66	-1.42	-22.50	20 28 4.31	53 48 34.2
20 28 23.0	8.0	28 55.78	28 49.3	40 31.65	-5.15	-0 6.30	+11.63	-1.43	-22.50	20 28 54.53	53 43 52.1
20 30 49.9	9.3	31 25.72	30 57.2	0 8.95	-22.77	-0 6.30	+11.08	-1.46	-22.50	20 31 24.56	53 23 57.3
20 31 48.5	9.2	32 20.52	31 49.3	28 55.40	-24.60	-0 6.30	+11.28	-1.47	-22.55	20 32 19.26	53 55 9.4
20 33 30.1	9.5	34 4.50	33 36.0	20 1.80	-22.39	-0 6.30	+11.88	-1.49	-22.55	20 34 3.23	54 4 6.3
20 35 20.0	9.2	35 55.68	35 22.2	1 2.90	-26.76	-0 6.30	+10.97	-1.51	-22.50	20 35 54.57	53 23 0.5
20 37 24.4	8.5	37 58.70	37 27.4	38 18.75	-24.78	-0 6.30	+11.17	-1.53	-22.55	20 37 57.53	53 45 47.3
20 38 33.1	9.5	39 9.26	38 46.7	46 2.00	-17.95	-0 6.30	+11.36	-1.56	-22.55	20 39 8.11	53 38 11.4
ZONE 124, OCTOBER 9, 1871.											
21 27 19.0	7.5	27 59.26	27 29.4	56 29.30	-23.84	-0 6.83	+11.16	-1.90	-22.95	21 27 58.37	53 27 48.3
21 28 19.4	8.0	29 0.16	28 34.6	50 46.95	-20.36	-0 6.82	+11.40	-1.91	-22.95	21 28 59.28	53 33 34.6
21 29 20.9	9.0	30 1.62	29 48.6	3 20.05	-10.39	-0 6.83	+11.03	-1.92	-22.95	21 30 0.78	53 21 11.3
21 30 42.7	8.0	31 23.12	30 49.6	17 13.65	-26.85	-0 6.83	+10.63	-1.93	-22.90	21 31 22.34	53 7 1.2
21 32 12.3	8.0	32 52.20	32 22.4	19 44.30	-23.33	-0 6.82	+11.49	-1.96	-22.95	21 32 51.28	54 4 35.2
21 33 40.5	8.8	34 22.74	33 54.0	14 48.90	-23.04	-0 6.83	+11.02	-1.96	-22.90	21 34 22.00	53 9 30.8
21 34 40.3	8.8	35 21.42	35 5.5	20 51.90	-12.50	-0 6.82	+12.07	-1.98	-22.95	21 35 20.55	54 3 39.5
21 35 45.8	7.7	36 29.24	36 6.4	38 58.55	-18.05	-0 6.82	+11.33	-1.99	-22.90	21 36 28.44	53 45 26.9
21 37 16.4	9.0	37 57.66	37 29.2	54 29.80	-22.71	-0 6.83	+10.92	-2.00	-22.85	21 37 56.92	53 29 50.9
21 38 3.6	7.0	38 44.98	38 27.2	25 2.85	-14.02	-0 6.82	+12.10	-2.02	-22.85	21 38 44.17	53 59 27.8
21 39 8.1	7.8	39 49.36	39 20.4	41 44.15	-22.98	-0 6.82	+11.46	-2.02	-22.80	21 39 48.62	53 42 37.2
21 40 17.4	8.7	40 58.54	40 28.9	28 20.05	-23.34	-0 6.82	+11.52	-2.04	-22.80	21 40 57.78	53 56 1.2
21 41 28.7	9.2	42 11.06	41 36.3	51 51.05	-27.69	-0 6.82	+11.16	-2.04	-22.80	21 42 10.39	53 32 25.8
21 42 35.6	9.0	43 17.32	42 49.9	22 0.10	-21.55	-0 6.82	+11.79	-2.06	-22.80	21 43 16.58	54 2 23.7
21 46 22.0	9.3	47 4.64	46 33.4	41 57.30	-24.73	-0 6.82	+11.40	-2.09	-22.70	21 47 4.03	53 42 23.8
21 47 20.8	8.8	48 3.74	47 41.9	16 59.55	-17.52	-0 6.83	+10.84	-2.10	-22.70	21 48 3.22	53 7 28.4
21 48 15.8	6.5	48 57.72	48 29.6	59 50.60	-22.43	-0 6.83	+10.79	-2.11	-22.70	21 48 57.17	53 24 32.6
21 49 47.8	9.0	50 30.56	49 58.0	50 16.55	-25.93	-0 6.82	+11.39	-2.12	-22.65	21 50 30.03	53 34 4.0
21 51 24.2	8.6	52 7.12	51 32.1	23 18.30	-27.54	-0 6.82	+11.53	-2.15	-22.65	21 52 6.53	54 1 1.1
21 53 21.3	8.9	54 5.24	53 36.2	31 8.25	-22.80	-0 6.82	+11.73	-2.16	-22.60	21 54 4.72	53 53 16.5
21 54 30.0	9.0	55 12.70	54 52.4	49 35.50	-16.14	-0 6.82	+11.13	-2.17	-22.55	21 55 12.24	53 34 55.6
21 55 44.7	9.0	56 28.18	55 55.2	50 47.95	-26.25	-0 6.82	+11.34	-2.18	-22.55	21 56 27.75	53 33 33.5
21 56 23.8	8.7	57 7.22	56 57.6	12 57.15	-7.70	-0 6.83	+10.95	-2.18	-22.50	21 57 6.85	53 11 42.6
21 58 10.3	7.5	58 53.62	58 22.8	7 52.70	-24.08	-0 6.82	+11.93	-2.22	-22.50	21 58 53.12	54 16 32.0
21 59 28.2	8.8	0 11.44	59 44.1	4 55.20	-21.83	-0 6.83	+10.69	-2.21	-22.45	21 0 11.10	53 19 30.7
22 1 21.3	8.5	2 4.32	1 41.5	29 56.55	-17.99	-0 6.82	+11.44	-2.24	-22.45	21 2 3.94	53 54 34.3
22 2 50.3	8.8	3 34.54	3 7.2	20 21.05	-21.46	-0 6.82	+12.06	-2.26	-22.40	21 3 34.16	54 4 7.3
22 4 1.9	8.8	4 46.22	4 23.9	50 45.60	-17.74	-0 6.82	+11.50	-2.26	-22.35	21 4 45.94	53 33 46.1
22 5 29.9	9.0	6 14.22	5 52.1	18 58.90	-17.36	-0 6.82	+11.73	-2.28	-22.35	21 6 13.89	54 5 33.7
22 6 55.1	9.0	7 40.42	7 14.3	8 52.15	-20.91	-0 6.83	+10.75	-2.28	-22.30	22 7 40.22	53 15 36.2

R. A. 1855.0. According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
						m s	"	s	"		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
22 7 55.5	8.7	8 39.86	8 19.7	7 7.35	-16.17	-0 6.83	+11.07	-2.29	-22.25	22 8 39.68	53 17 26.2
22 8 55.7	8.5	9 40.80	9 25.9	19 59.10	-11.98	-0 6.83	+10.53	-2.30	-22.25	22 9 40.65	53 4 38.3
22 10 49.5	9.0	11 34.58	11 5.0	59 46.10	-23.63	-0 6.83	+10.79	-2.32	-22.20	22 11 34.43	53 24 40.3
22 11 40.4	9.0	12 25.96	12 6.6	31 35.10	-15.31	-0 6.82	+11.86	-2.34	-22.20	22 12 25.77	53 53 0.8
22 12 55.1	8.7	13 40.48	13 13.5	32 37.40	-21.32	-0 6.82	+11.59	-2.35	-22.20	22 13 40.32	53 51 52.4
22 15 2.4	8.8	15 48.42	15 17.9	13 15.30	-24.42	-0 6.83	+10.72	-2.36	-22.10	22 15 48.38	53 11 11.0
22 16 24.1	9.0	17 10.06	16 38.3	53 52.50	-25.33	-0 6.83	+10.98	-2.37	-22.05	22 17 10.01	53 30 33.4
22 17 50.6	8.6	18 37.16	18 12.5	42 52.95	-19.50	-0 6.83	+11.41	-2.39	-22.00	22 18 37.11	53 41 39.5
ZONE 125, OCTOBER 16, 1871.											
20 58 43.6	9.2	59 21.36	58 52.5	22 42.25	-22.73	-0 7.60	+11.90	-1.40	-24.05	20 59 19.42	54 1 30.8
20 59 28.3	7.8	0 6.36	59 53.5	33 33.80	-10.19	-0 7.60	+11.80	-1.41	-24.05	21 0 4.46	53 50 51.9
21 0 51.8	9.2	1 29.62	1 0.5	39 46.05	-23.04	-0 7.60	+11.37	-1.42	-24.05	21 1 27.76	53 44 26.7
21 1 55.8	8.6	2 34.10	2 4.4	52 57.95	-23.64	-0 7.60	+11.28	-1.43	-24.05	21 2 32.30	53 31 14.1
21 3 0.6	7.7	3 37.90	3 10.2	54 11.95	-21.53	-0 7.60	+12.29	-1.44	-24.15	21 3 35.93	54 30 3.7
21 4 5.5	8.7	4 44.78	4 14.4	7 57.20	-24.35	-0 7.60	+10.86	-1.46	-24.05	21 4 43.04	53 16 14.6
21 5 13.5	8.8	5 51.94	5 21.0	36 4.35	-23.85	-0 7.60	+12.91	-1.46	-24.15	21 5 49.94	54 48 10.1
21 6 40.1	8.6	7 18.36	6 49.4	38 32.30	-22.41	-0 7.60	+12.63	-1.48	-24.15	21 7 16.38	54 45 43.7
21 7 54.8	8.8	8 32.80	7 57.7	34 57.10	-27.09	-0 7.60	+12.96	-1.49	-24.20	21 8 30.83	54 49 14.8
21 8 45.2	8.1	9 22.16	9 10.7	31 20.15	-8.86	-0 7.60	+13.18	-1.50	-24.20	21 9 20.19	54 53 10.4
21 9 58.6	7.8	10 36.62	10 4.4	15 13.05	-25.26	-0 7.60	+12.27	-1.52	-24.15	21 10 34.80	54 9 0.5
21 10 50.4	8.0	11 27.58	11 0.7	24 56.80	-20.66	-0 7.60	+12.75	-1.52	-24.20	21 11 25.62	54 59 22.0
21 12 6.3	9.3	12 45.12	12 18.8	32 30.90	-20.27	-0 7.60	+12.78	-1.54	-24.20	21 12 43.20	54 51 48.6
21 13 38.0	8.4	14 15.74	13 35.2	39 28.55	-31.31	-0 7.59	+12.30	-1.56	-24.20	21 14 13.87	54 44 39.8
21 15 9.8	9.2	15 50.02	15 22.4	1 4.65	-21.52	-0 7.59	+12.50	-1.58	-24.20	21 15 48.23	54 23 14.0
21 16 27.4	9.2	17 6.94	16 34.7	24 51.10	-24.74	-0 7.59	+12.67	-1.59	-24.20	21 17 5.07	54 59 24.8
21 17 43.7	8.9	18 23.18	17 52.7	3 23.95	-23.81	-0 7.59	+12.17	-1.60	-24.15	21 18 21.44	54 20 52.8
21 18 38.2	8.5	19 17.86	18 53.1	39 21.20	-19.21	-0 7.59	+12.57	-1.61	-24.20	21 19 16.06	54 45 0.6
21 20 38.4	7.8	21 16.40	21 7.1	35 50.70	-7.18	-0 7.59	+13.04	-1.63	-24.20	21 21 14.62	54 48 44.1
21 22 36.3	7.5	23 14.02	22 43.6	21 8.35	-24.42	-0 7.59	+13.18	-1.66	-24.20	21 23 12.22	55 3 9.8
21 24 19.8	6.5	24 58.68	24 19.1	31 52.15	-30.51	-0 7.59	+12.72	-1.68	-24.20	21 24 56.94	54 52 19.8
21 25 19.3	7.5	25 59.38	25 26.7	18 4.25	-25.68	-0 7.59	+11.91	-1.69	-24.15	21 25 57.79	54 6 12.0
21 26 13.5	7.8	26 52.82	26 30.8	32 37.45	-16.96	-0 7.59	+12.93	-1.70	-24.20	21 26 51.11	54 51 48.7
21 26 52.2	8.9	27 32.26	27 17.3	56 58.55	-11.68	-0 7.59	+12.50	-1.70	-24.15	21 27 30.63	54 27 32.6
21 28 3.8	9.2	28 44.32	28 28.9	16 8.90	-12.08	-0 7.59	+12.39	-1.72	-24.15	21 28 42.76	54 8 22.0
21 29 23.5	9.2	30 5.04	29 38.5	56 28.50	-20.63	-0 7.59	+12.57	-1.73	-24.15	21 30 3.45	54 27 54.3
21 30 9.7	8.5	30 49.99	30 44.2	17 4.45	-3.77	-0 7.59	+12.31	-1.74	-24.15	21 30 48.46	54 7 35.1
21 31 1.8	9.3	31 43.06	31 29.8	55 1.65	-10.34	-0 7.59	+12.89	-1.75	-24.15	21 31 41.49	54 29 32.2
21 32 11.4	8.7	32 53.38	32 28.9	23 37.30	-18.81	-0 7.59	+12.94	-1.76	-24.20	21 32 51.74	55 0 48.3
ZONE 126, OCTOBER 16, 1871.											
22 37 48.5	9.1	38 37.02	38 4.2	43 18.10	-25.39	-0 7.68	+12.50	-2.46	-23.05	22 38 36.54	54 41 10.7
22 39 14.4	8.8	40 2.56	39 44.8	5 57.10	-13.91	-0 7.68	+12.55	-2.46	-23.00	22 40 2.16	54 18 43.5
22 40 9.8	8.9	40 58.40	40 41.8	54 23.00	-12.83	-0 7.68	+12.39	-2.48	-23.00	22 40 57.99	54 30 18.6
22 42 25.2	9.0	43 15.60	42 52.6	6 12.50	-17.98	-0 7.68	+12.47	-2.49	-22.90	22 43 15.27	54 18 24.4
22 43 48.9	6.8	44 37.02	44 8.0	13 22.85	-22.73	-0 7.68	+12.02	-2.51	-22.85	22 44 36.72	54 11 9.1
22 46 0.4	9.0	46 53.04	46 28.0	34 15.35	-19.28	-0 7.68	+12.70	-2.54	-22.80	22 46 52.73	54 50 21.0
22 47 22.9	8.5	48 13.36	47 40.9	27 0.05	-25.00	-0 7.68	+12.95	-2.56	-22.80	22 48 13.06	54 57 31.0
22 48 12.1	8.5	49 4.06	48 44.8	40 8.50	-14.92	-0 7.68	+13.11	-2.56	-22.75	22 49 3.80	54 44 33.0
22 50 42.9	9.0	51 34.28	51 6.3	52 27.75	-18.34	-0 7.68	+12.59	-2.58	-22.65	22 51 34.10	54 32 10.1

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	s	s	"	h m s	° ' "
22 52 0.9	8.6	52 50.96	52 33.1	2 55.80	-13.97	-0 7.68	+12.42	-2.59	-22.60	22 52 50.82	54 21 46.4
22 53 53.5	8.8	54 44.56	54 12.4	35 6.30	-24.84	-0 7.68	+13.02	-2.62	-22.55	22 54 44.41	54 49 25.9
22 54 55.3	8.7	55 45.98	55 29.3	6 14.80	-13.05	-0 7.68	+12.55	-2.61	-22.50	22 55 45.92	54 18 28.8
22 55 50.7	8.8	56 43.56	56 32.9	10 18.40	-8.38	-0 7.68	+12.61	-2.62	-22.45	22 56 43.52	54 14 30.2
22 56 41.3	8.8	57 33.04	57 13.9	33 48.25	-14.73	-0 7.68	+12.82	-2.64	-22.45	22 57 32.96	54 50 54.2
22 57 49.3	8.7	58 39.38	58 29.7	49 17.45	-7.53	-0 7.68	+12.55	-2.65	-22.40	22 58 39.35	54 35 32.1
22 59 5.4	8.9	59 57.24	59 29.5	40 4.35	-21.42	-0 7.68	+13.00	-2.66	-22.35	22 59 57.22	54 44 31.9
23 1 4.7	9.0	1 56.84	1 24.3	14 1.10	-25.47	-0 7.69	+11.89	-2.67	-22.25	23 1 56.91	54 10 30.3
23 2 57.6	9.0	3 50.58	3 20.6	34 41.00	-23.71	-0 7.69	+11.47	-2.68	-22.20	23 3 50.72	53 49 52.0
23 5 21.0	9.2	6 14.78	5 49.0	47 29.85	-20.01	-0 7.69	+12.62	-2.72	-22.15	23 6 14.91	54 37 8.2
23 8 3.9	8.8	8 55.56	8 26.8	39 48.90	-22.26	-0 7.69	+12.49	-2.75	-22.05	23 8 55.73	54 44 47.1
23 10 0.0	8.5	10 53.54	10 23.9	54 6.45	-23.02	-0 7.69	+12.29	-2.76	-21.95	23 10 53.78	54 30 28.8
23 10 59.8	7.8	11 53.50	11 35.1	0 20.25	-14.35	-0 7.69	+12.72	-2.77	-21.90	23 11 53.77	54 24 24.2
23 12 2.4	...	12 56.18	12 35.4	52 29.85	-16.16	-0 7.69	+12.60	-2.78	-21.90	23 12 56.47	54 32 12.8
ZONE 127, OCTOBER 17, 1871.											
20 56 55.8	9.2	57 33.32	57 23.5	47 30.55	-7.60	-0 8.20	+12.52	-1.35	-24.10	20 57 30.67	54 36 57.4
20 58 43.6	8.8	59 21.80	58 49.2	22 39.10	-25.64	-0 8.20	+11.62	-1.36	-24.20	20 59 19.30	54 1 30.2
20 59 28.3	7.8	0 6.86	0 2.5	33 41.50	-3.48	-0 8.20	+11.63	-1.37	-24.20	21 0 4.40	53 50 50.2
21 0 51.8	9.2	1 30.14	1 3.7	39 47.80	-20.91	-0 8.20	+11.18	-1.40	-24.20	21 1 27.70	53 44 26.4
21 1 55.8	8.7	2 34.56	2 8.1	53 0.85	-21.09	-0 8.20	+11.12	-1.40	-24.10	21 1 32.19	53 31 13.5
21 3 0.6	8.1	3 38.42	3 20.7	54 19.90	-13.76	-0 8.20	+12.16	-1.41	-24.20	21 3 35.88	54 30 2.9
21 4 5.5	8.2	4 45.16	5 11.5	8 41.65	+21.15	-0 8.20	+10.77	-1.43	-24.20	21 4 42.85	53 16 15.0
21 5 13.5	8.4	5 52.36	5 48.4	36 23.70	-3.09	-0 8.20	+12.87	-1.43	-24.30	21 5 49.79	54 48 10.9
21 6 46.2	7.7	7 22.42	7 1.0	35 6.05	-16.51	-0 8.20	+12.92	-1.45	-24.30	21 *7 19.87	54 49 15.6
21 7 54.8	9.0	8 33.24	8 29.0	35 19.00	-3.24	-0 8.20	+13.01	-1.46	-24.30	21 8 30.70	54 49 16.3
21 8 45.2	8.0	9 22.76	9 12.8	31 20.25	-7.70	-0 8.20	+12.95	-1.48	-24.30	21 9 20.21	54 53 10.7
21 9 58.6	7.5	10 37.18	10 8.9	15 16.75	-22.20	-0 8.21	+12.12	-1.49	-24.30	21 10 34.78	54 8 59.2
21 10 50.4	7.7	11 28.20	11 4.3	24 58.60	-18.36	-0 8.21	+13.11	-1.49	-24.30	21 11 25.66	54 59 22.4
21 12 6.3	9.2	12 45.62	12 16.1	32 27.20	-22.74	-0 8.21	+12.62	-1.50	-24.30	21 12 43.13	54 51 49.2
21 13 38.0	8.3	14 16.34	13 43.9	39 34.85	-25.04	-0 8.21	+12.21	-1.52	-24.30	21 14 13.89	54 44 39.2
21 15 9.8	9.1	15 50.54	15 17.0	1 0.05	-26.12	-0 8.21	+12.21	-1.54	-24.30	21 15 48.17	54 23 13.3
21 16 27.4	9.2	17 7.40	16 52.3	25 5.60	-11.60	-0 8.21	+13.19	-1.55	-24.40	21 17 4.95	54 59 23.4
21 17 43.7	9.0	18 23.76	17 55.5	3 26.05	-22.09	-0 8.21	+11.99	-1.57	-24.30	21 18 21.43	54 20 51.7
21 18 38.2	8.1	19 18.34	18 55.1	39 22.50	-17.93	-0 8.21	+12.38	-1.59	-24.40	21 19 15.94	54 44 59.9
21 19 53.5	8.8	20 33.30	20 5.5	20 13.55	-21.32	-0 8.21	+13.11	-1.60	-24.40	21 20 30.87	54 4 6.4
21 22 36.3	7.5	23 14.68	22 36.0	21 2.15	-31.09	-0 8.22	+12.84	-1.62	-24.40	21 23 12.29	55 3 8.4
21 24 19.8	6.4	24 59.28	24 21.7	31 54.10	-28.97	-0 8.22	+12.57	-1.64	-24.40	21 24 56.95	54 52 18.7
21 25 19.3	7.7	25 59.86	25 31.9	18 7.70	-21.99	-0 8.22	+11.79	-1.66	-24.30	21 25 57.67	54 6 11.6
21 26 13.5	7.5	26 53.28	26 25.9	32 33.85	-21.12	-0 8.22	+12.67	-1.66	-24.40	21 26 50.98	54 51 47.3
21 26 52.2	8.7	27 32.78	27 23.8	57 5.30	-6.93	-0 8.22	+12.48	-1.67	-24.30	21 27 30.55	54 27 30.1
21 28 3.8	9.0	28 44.90	28 30.9	16 10.85	-10.99	-0 8.22	+12.20	-1.68	-24.30	21 28 42.75	54 8 20.5
21 29 23.5	9.0	30 5.52	29 35.6	56 26.45	-23.27	-0 8.22	+12.34	-1.70	-24.30	21 30 3.33	54 27 53.0
21 30 9.7	8.3	30 50.50	30 34.2	16 56.60	-12.71	-0 8.22	+12.08	-1.71	-24.30	21 30 48.37	54 7 33.3
21 31 1.8	8.8	31 43.54	31 30.5	55 2.95	-10.11	-0 8.22	+12.71	-1.72	-24.30	21 31 41.37	54 29 30.4
21 32 11.4	8.9	32 53.84	32 29.6	23 38.15	-18.58	-0 8.22	+12.75	-1.73	-24.40	21 32 51.60	55 0 46.9
ZONE 128, OCTOBER 17, 1871.											
22 28 24.2	8.0	29 12.00	28 47.4	58 7.85	-19.63	-0 7.70	+11.17	-2.32	-23.50	22 29 11.48	53 26 24.2
22 30 19.9	9.0	31 7.08	30 43.2	0 29.40	-19.08	-0 7.69	+13.45	-2.36	-23.40	22 31 6.49	54 24 5.9

* 21 7 [19.87]

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
22 31 35.8	8.9	32 23.62	32 10.5	56 8.25	-10.23	-0 7.69	+12.38	-2.37	-23.40	22 32 23.05	54 28 35.0
22 32 29.5	9.5	33 18.14	33 8.4	4 14.55	-7.58	-0 7.69	+12.20	-2.37	-23.40	22 33 17.61	54 20 31.2
22 33 37.7	8.5	34 26.10	34 4.1	0 44.30	-17.15	-0 7.69	+12.56	-2.38	-23.40	22 34 25.59	54 23 52.4
22 34 30.0	8.0	35 18.22	35 3.0	26 19.85	-11.69	-0 7.69	+13.06	-2.41	-23.50	22 35 17.65	54 58 22.9
22 35 36.6	9.0	36 25.36	36 6.0	39 36.90	-15.00	-0 7.69	+12.54	-2.40	-23.40	22 36 24.86	54 45 2.2
22 37 48.5	9.2	38 37.06	38 9.1	43 22.15	-21.68	-0 7.69	+12.39	-2.44	-23.20	22 38 36.59	54 41 10.6
22 39 14.4	8.9	40 2.58	39 37.7	5 52.20	-19.45	-0 7.69	+12.32	-2.44	-23.25	22 40 2.19	54 18 42.8
22 40 9.8	8.8	40 58.48	40 40.8	54 22.05	-13.69	-0 7.69	+12.21	-2.45	-23.20	22 40 58.09	54 30 18.8
22 42 25.2	9.0	43 15.70	42 46.1	6 8.75	-23.21	-0 7.69	+12.23	-2.47	-23.15	22 43 15.38	54 18 22.9
22 43 48.9	7.6	44 37.06	44 6.2	13 21.30	-24.22	-0 7.70	+11.83	-2.48	-23.10	22 44 36.77	54 11 9.2
22 46 0.4	8.9	46 53.06	46 24.4	34 13.40	-22.14	-0 7.70	+12.47	-2.52	-23.05	22 46 52.75	54 50 20.1
22 47 22.9	8.8	48 13.32	47 42.9	27 1.50	-23.38	-0 7.70	+12.79	-2.54	-23.00	22 48 13.02	54 57 31.3
22 48 12.1	8.3	49 3.92	48 55.1	40 17.70	-6.81	-0 7.70	+12.98	-2.54	-23.00	22 49 3.66	54 44 31.9
22 50 42.9	9.0	51 34.14	51 24.9	52 37.70	-7.15	-0 7.70	+12.52	-2.56	-22.90	22 51 33.96	54 32 11.5
22 52 0.9	8.3	52 51.04	52 25.9	2 49.10	-19.58	-0 7.70	+12.19	-2.57	-22.85	22 52 50.90	54 21 47.5
22 53 53.5	8.8	54 44.64	54 18.3	35 8.70	-20.29	-0 7.70	+12.93	-2.60	-22.80	22 54 44.49	54 49 28.2
22 54 55.3	8.5	55 45.94	55 24.1	6 12.10	-17.04	-0 7.70	+12.34	-2.60	-22.75	22 55 45.87	54 18 27.6
22 55 50.7	8.9	56 43.64	56 23.0	10 8.40	-16.13	-0 7.70	+12.40	-2.60	-22.70	22 56 43.60	54 14 32.4
22 56 41.3	8.5	57 33.06	57 23.3	33 56.00	-7.56	-0 7.70	+12.71	-2.63	-22.70	22 57 32.97	54 50 53.7
22 57 49.3	9.0	58 39.28	58 18.4	49 8.95	-16.22	-0 7.71	+12.33	-2.63	-22.65	22 58 39.24	54 35 31.9
22 59 5.4	8.8	59 57.26	59 35.0	40 8.75	-17.24	-0 7.71	+12.91	-2.64	-22.60	22 59 57.23	54 44 31.9
23 1 4.7	8.7	1 56.78	1 25.0	13 59.60	-24.92	-0 7.71	+11.75	-2.65	-22.50	23 1 56.85	54 10 32.4
23 2 57.6	9.1	3 50.58	3 20.8	34 40.35	-23.55	-0 7.71	+11.34	-2.66	-22.40	23 3 50.72	53 49 52.9
23 5 21.0	9.0	6 14.76	5 45.4	47 26.10	-22.80	-0 7.71	+12.46	-2.70	-22.40	23 6 14.89	54 37 9.3
23 8 3.9	8.9	8 55.48	9 9.4	40 20.75	+10.74	-0 7.71	+13.01	-2.73	-22.30	23 8 55.65	54 44 49.0
23 10 0.0	8.5	10 53.54	10 23.9	54 5.65	-23.02	-0 7.71	+12.15	-2.74	-22.20	23 10 53.78	54 30 29.7
23 10 59.8	8.0	11 53.42	11 33.0	0 18.60	-15.90	-0 7.71	+12.59	-2.75	-22.15	23 11 53.69	54 24 24.4
23 12 2.4	8.9	12 56.04	12 29.8	52 25.45	-20.36	-0 7.71	+12.43	-2.76	-22.15	23 12 56.33	54 32 13.0
ZONE 129, OCTOBER 21, 1871.											
21 32 23.0	8.0	33 3.38	32 44.3	51 6.25	-14.83	-0 7.56	+12.87	-1.61	-24.85	21 33 2.00	54 33 21.7
21 34 13.9	9.0	34 55.22	34 39.2	53 56.60	-12.44	-0 7.56	+12.51	-1.63	-24.90	21 34 53.88	54 30 33.7
21 35 15.2	8.7	35 55.92	35 30.2	50 1.10	+26.62	-0 7.56	+12.77	-1.64	-24.90	21 35 54.58	54 35 8.7
21 38 8.0	8.2	38 48.68	38 24.5	27 17.00	-18.61	-0 7.55	+13.07	-1.68	-24.90	21 38 47.33	54 57 8.5
21 39 23.9	9.0	40 4.98	39 30.9	46 4.95	-26.43	-0 7.56	+12.71	-1.69	-24.90	21 40 3.70	54 38 12.6
21 41 8.0	9.4	41 49.76	41 15.1	26 56.75	-26.68	-0 7.56	+12.95	-1.70	-24.90	21 41 48.46	54 57 21.2
21 42 8.7	9.1	42 51.70	42 19.3	7 16.00	-25.33	-0 7.57	+12.24	-1.72	-24.85	21 42 50.51	54 17 2.8
21 43 14.2	8.8	43 56.58	43 28.6	52 12.25	-22.29	-0 7.57	+11.46	-1.73	-24.80	21 43 55.52	53 32 9.1
21 44 24.2	8.4	45 6.38	44 39.8	28 12.45	-20.97	-0 7.57	+11.84	-1.75	-24.85	21 45 5.26	53 56 10.8
21 45 32.4	8.5	46 14.00	45 47.7	15 54.00	-20.63	-0 7.57	+12.33	-1.76	-24.85	21 46 12.88	54 8 30.2
21 46 52.5	9.5	47 34.20	47 9.6	25 54.75	-18.90	-0 7.56	+13.26	-1.77	-24.90	21 47 32.99	54 58 32.4
21 47 33.1	6.9	48 14.36	48 3.9	57 29.05	-8.18	-0 7.57	+12.64	-1.78	-24.85	21 48 13.23	54 27 8.3
21 48 50.5	8.8	49 33.56	49 6.0	8 55.70	-22.11	-0 7.58	+10.98	-1.79	-24.75	21 49 32.61	53 15 26.4
21 49 51.4	8.9	50 34.22	50 10.5	24 59.90	-18.66	-0 7.57	+12.32	-1.81	-24.80	21 50 33.19	53 59 27.2
21 51 24.2	8.5	52 7.48	51 34.2	23 16.40	-26.20	-0 7.57	+11.83	-1.83	-24.80	21 52 6.46	54 1 2.9
21 53 45.3	9.0	54 28.74	54 1.7	11 14.45	-21.14	-0 7.58	+12.37	-1.85	-24.80	21 54 27.73	54 13 10.9
21 54 58.3	6.9	55 41.58	55 10.2	59 8.40	-24.46	-0 7.58	+12.20	-1.87	-24.80	21 55 40.56	54 25 13.7
21 56 7.0	9.0	56 50.92	56 18.4	37 46.90	-25.10	-0 7.58	+12.70	-1.88	-24.80	21 56 49.86	54 46 35.3
21 58 10.3	7.3	58 53.96	58 22.6	7 50.75	-24.56	-0 7.58	+12.02	-1.91	-24.75	21 58 53.01	54 16 31.7
21 59 47.6	9.2	0 31.16	59 58.6	56 2.80	-25.37	-0 7.58	+12.58	-1.92	-24.75	22 0 30.22	54 28 19.7
22 1 6.2	7.4	1 49.96	1 17.6	46 5.45	-25.12	-0 7.58	+12.75	-1.94	-24.75	22 1 49.01	54 38 17.7
22 2 47.2	8.6	3 31.16	2 52.3	4 13.55	-30.37	-0 7.58	+11.96	-1.95	-24.70	22 3 30.29	54 20 3.9
22 4 8.8	8.5	4 52.88	4 39.7	51 21.30	-10.50	-0 7.58	+11.75	-1.96	-24.65	22 4 52.14	53 33 16.1

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
22 4 52.3	8.0	5 36.90	5 25.5	28 2.30	- 8.99	-0 7.58	+12.05	-1.97	-24.65	22 5 36.12	53 56 37.0
22 6 18.8	8.9	7 3.22	6 29.1	45 16.40	-26.42	-0 7.58	+12.83	-1.99	-24.65	22 7 2.37	54 39 6.5
22 7 46.5	9.2	8 31.38	8 4.3	6 42.00	-21.18	-0 7.59	+12.41	-2.00	-24.65	22 8 30.60	54 17 46.0
22 9 0.6	8.7	9 45.74	9 18.6	34 40.75	-20.90	-0 7.59	+12.66	-2.02	-24.65	22 9 44.90	54 49 47.9
22 9 50.5	9.1	10 34.70	10 29.4	35 57.45	- 4.09	-0 7.59	+13.22	-2.03	-24.65	22 10 33.88	54 48 48.7
22 10 37.5	8.5	11 22.21	11 48.6	53 9.30	+20.51	-0 7.59	+12.52	-2.04	-24.60	22 11 21.44	54 32 1.0
22 11 37.8	8.8	12 23.56	12 49.0	13 13.85	+19.90	-0 7.59	+12.16	-2.04	-24.55	22 12 22.86	54 11 55.6
22 12 41.7	8.5	13 25.68	13 13.2	45 17.65	- 9.69	-0 7.59	+13.09	-2.06	-24.55	22 13 24.93	54 39 23.4
22 15 1.9	7.8	15 46.96	15 32.3	21 18.27	-11.28	-0 7.58	+13.42	-2.09	-24.50	22 15 46.21	55 3 21.9
22 16 11.0	9.0	16 56.34	16 28.9	22 48.55	-22.07	-0 7.58	+10.83	-2.08	-24.45	22 16 55.64	55 1 38.5
22 17 29.2	9.2	18 15.24	11 43.1	29 6.60	-24.71	-0 7.58	+12.76	-2.11	-24.45	22 18 14.57	54 55 19.9
22 18 45.1	9.8	19 32.10	19 5.7	14 27.95	-20.70	-0 7.59	+11.97	-2.12	-24.40	22 19 31.53	54 10 2.0
22 20 10.0	9.0	20 56.52	20 28.3	48 40.10	-21.88	-0 7.60	+12.52	-2.14	-24.40	22 20 55.91	54 35 49.4
22 21 8.8	...	21 55.24	21 30.0	32 36.50	-19.90	-0 7.60	+11.88	-2.14	-24.30	22 21 54.75	53 51 54.6
ZONE 130, OCTOBER 22, 1871.											
22 48 12.1	8.5	49 3.58	48 32.2	39 56.85	-24.27	-0 7.60	+12.13	-2.43	-23.75	22 49 3.53	54 44 34.7
22 50 58.6	8.9	51 48.64	51 18.8	23 25.95	-22.88	-0 7.60	+12.62	-2.47	-24.00	22 51 48.61	55 1 7.5
22 52 54.3	8.2	53 45.28	53 19.1	33 25.35	-20.70	-0 7.61	+11.43	-2.46	-23.90	22 53 45.41	53 51 9.4
22 54 29.3	8.6	55 20.14	54 53.7	52 11.60	-20.51	-0 7.61	+12.30	-2.50	-23.85	22 55 20.23	54 32 24.4
22 56 30.6	7.8	57 20.82	56 53.6	50 44.90	-21.12	-0 7.61	+12.48	-2.52	-23.80	22 57 20.95	54 33 51.0
22 58 0.2	8.8	58 52.04	58 28.1	59 6.00	-18.63	-0 7.61	+11.99	-2.53	-23.75	22 58 52.21	54 25 32.1
22 59 5.4	9.2	59 57.12	59 36.0	40 7.95	-16.32	-0 7.61	+12.81	-2.55	-23.75	22 59 57.28	54 44 33.3
23 1 34.3	9.5	2 26.60	2 4.7	4 5.55	-17.10	-0 7.61	+11.92	-2.56	-23.65	23 2 26.86	54 20 34.4
23 3 2.8	8.8	3 55.62	3 27.2	39 41.60	-22.49	-0 7.61	+11.13	-2.56	-23.60	23 3 55.97	53 44 52.4
23 5 22.1	9.0	6 14.46	5 56.8	21 59.05	-13.58	-0 7.60	+12.95	-2.62	-23.55	23 6 14.75	55 2 45.9
23 7 37.3	8.2	8 30.48	7 59.0	17 1.90	-25.31	-0 7.62	+10.58	-2.60	-23.40	23 8 30.96	53 6 29.2
23 8 32.6	8.4	9 23.06	9 3.8	9 6.30	-15.10	-0 7.61	+11.89	-2.63	-23.45	23 9 23.48	54 15 36.4
23 10 40.0	9.1	11 30.48	11 3.4	36 26.85	-20.92	-0 7.61	+12.67	-2.67	-23.40	23 11 30.89	54 48 11.0
23 12 0.4	8.8	12 54.86	12 26.5	41 34.30	-22.51	-0 7.61	+11.46	-2.65	-23.30	23 12 55.40	53 43 0.9
23 13 15.0	9.0	14 7.30	13 49.7	22 18.25	-13.50	-0 7.60	+13.05	-2.70	-23.30	23 14 7.76	55 2 27.7
23 14 26.8	9.2	15 20.86	14 58.1	25 40.05	-17.52	-0 7.60	+13.00	-2.71	-23.25	23 15 21.36	54 59 1.9
23 16 35.7	9.2	17 30.98	17 5.5	0 19.95	-19.87	-0 7.61	+12.39	-2.72	-23.15	23 17 31.56	54 24 19.3
23 17 20.4	8.8	18 14.84	18 5.4	26 31.85	- 7.23	-0 7.61	+12.95	-2.75	-23.15	23 18 15.38	54 58 20.7
23 18 51.0	6.5	19 43.70	19 14.0	40 16.55	-22.97	-0 7.62	+12.67	-2.73	-23.05	23 19 44.31	54 44 20.1
23 19 55.3	8.6	20 48.82	20 23.6	7 26.70	-19.70	-0 7.62	+12.02	-2.74	-23.00	23 20 49.48	54 17 12.8
23 20 9.0	8.6	21 3.88	20 39.4	7 26.70	-19.15	-0 7.62	+12.03	-2.75	-23.00	23 21 4.52	54 17 13.3
23 21 6.7	8.2	22 0.62	21 37.1	26 0.45	-18.06	-0 7.61	+12.94	-2.78	-22.95	23 22 1.25	54 58 41.7
23 22 18.0	9.0	23 14.10	22 47.0	21 47.75	-20.79	-0 7.61	+12.86	-2.78	-22.95	23 23 14.77	55 2 51.6
23 23 15.0	8.5	24 9.50	23 45.0	50 0.35	-19.02	-0 7.62	+12.62	-2.79	-22.90	23 24 10.20	54 34 40.6
23 24 21.5	8.9	25 16.36	24 58.0	21 12.90	-14.12	-0 7.61	+13.05	-2.81	-22.85	23 25 17.07	55 3 33.5
23 25 12.5	8.8	26 6.28	25 51.0	10 53.20	-11.98	-0 7.62	+12.25	-2.80	-22.80	23 26 7.05	54 13 54.7
23 27 20.0	8.0	28 14.62	27 49.8	36 45.95	-19.15	-0 7.62	+12.66	-2.86	-22.70	23 28 15.38	54 47 55.4
23 28 35.8	8.8	29 31.40	29 5.6	5 7.00	-20.63	-0 7.63	+11.20	-2.80	-22.65	23 29 32.30	53 19 31.5
23 30 13.5	9.8	31 11.20	30 41.1	57 8.10	-23.44	-0 7.62	+12.18	-2.85	-22.60	23 31 12.08	54 27 28.7
23 31 12.5	8.0	32 10.44	31 42.1	52 14.40	-21.99	-0 7.62	+12.28	-2.86	-22.55	23 32 11.34	54 32 24.0
23 32 21.0	9.2	33 19.70	32 51.8	49 21.40	-21.65	-0 7.62	+12.10	-2.88	-22.50	23 33 20.61	54 35 17.3
23 33 39.7	8.8	34 34.24	34 25.5	53 48.95	- 6.76	-0 7.62	+12.27	-2.89	-22.40	23 34 35.19	54 31 5.0
23 34 53.4	9.0	35 49.60	35 21.2	24 21.75	-22.36	-0 7.62	+11.48	-2.88	-22.35	23 35 50.61	54 0 15.8
23 37 20.4	6.5	38 17.20	37 42.7	53 46.00	-26.82	-0 7.62	+11.98	-2.92	-22.25	23 38 18.24	54 30 47.8
23 38 58.0	9.2	39 55.84	39 26.6	3 41.35	-22.79	-0 7.62	+11.90	-2.93	-22.20	23 39 56.92	54 20 56.6
23 39 47.7	7.5	40 44.04	40 25.5	14 43.95	-14.51	-0 7.62	+11.73	-2.93	-22.15	23 40 45.15	54 10 2.1
23 41 24.9	8.8	42 22.14	41 55.0	27 22.10	-20.84	-0 7.61	+12.71	-2.97	-22.10	23 42 23.26	54 57 18.7

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
23 42 21.5	9.0	43 18.04	42 57.7	26 54.65	-15.61	-0 7.61	+12.86	-2.98	-22.05	23 43 19.18	54 57 51.6
23 44 25.4	9.4	45 23.96	44 58.9	3 52.30	-19.59	-0 7.62	+11.94	-2.98	-21.90	23 45 25.17	54 20 49.3
23 46 30.0	9.8	47 28.22	46 56.6	13 14.95	-24.77	-0 7.62	+11.75	-3.00	-21.80	23 47 29.48	54 11 21.4
ZONE 131, NOVEMBER 2, 1871.											
21 33 7.1	8.7	33 49.32	33 29.2	57 6.70	-15.64	-0 9.25	+12.77	-1.25	-26.10	21 33 46.65	54 27 19.9
21 34 13.9	8.8	34 56.52	34 41.8	53 56.35	-11.17	-0 9.25	+12.68	-1.26	-26.10	21 34 53.86	54 30 34.8
21 35 15.2	8.8	35 57.36	35 32.4	49 14.50	-19.40	-0 9.25	+12.63	-1.27	-26.15	21 35 54.70	54 35 8.6
21 36 7.4	8.8	36 50.18	36 34.1	54 33.75	-12.52	-0 9.25	+12.60	-1.28	-26.15	21 36 47.55	54 29 56.3
21 38 8.0	8.2	38 49.98	38 17.9	27 10.40	-24.69	-0 9.25	+13.18	-1.30	-26.20	21 38 47.31	54 57 8.5
21 39 23.9	8.7	40 6.26	39 39.4	46 9.55	-20.85	-0 9.25	+13.00	-1.32	-26.20	21 40 3.66	54 38 13.2
21 41 8.0	9.6	41 51.10	42 23.8	27 46.80	+25.14	-0 9.25	+13.11	-1.34	-26.25	21 41 48.47	54 57 22.4
21 42 8.7	8.6	42 53.06	43 0.3	7 46.95	+ 5.63	-0 9.26	+12.57	-1.36	-26.20	21 42 50.54	54 17 2.4
21 43 14.2	8.6	43 58.02	43 47.6	52 25.35	- 8.28	-0 9.26	+11.79	-1.38	-26.15	21 43 55.62	53 32 9.6
21 44 24.2	8.5	45 7.82	44 42.6	28 11.50	-19.87	-0 9.26	+11.99	-1.39	-26.20	21 45 5.37	53 56 12.2
21 45 32.4	8.8	46 15.36	45 49.2	15 52.40	-20.55	-0 9.28	+12.46	-1.40	-26.20	21 46 12.89	54 8 31.3
21 46 52.5	9.8	47 35.60	47 10.8	25 53.15	-19.06	-0 9.26	+13.47	-1.41	-26.35	21 47 33.05	54 58 33.2
21 47 33.1	8.0	48 15.60	48 24.6	57 43.85	+ 7.01	-0 9.26	+12.71	-1.42	-26.25	21 48 13.14	54 27 8.0
21 48 50.5	8.9	49 34.92	49 9.0	8 56.20	-20.75	-0 9.28	+11.18	-1.46	-26.15	21 49 32.60	53 15 26.7
21 49 51.4	9.0	50 35.64	50 9.9	24 56.45	-20.23	-0 9.27	+12.41	-1.46	-26.25	21 50 33.26	53 59 28.3
21 51 24.2	8.8	52 8.86	51 42.2	23 21.20	-21.01	-0 9.27	+12.04	-1.48	-26.25	21 52 6.49	54 1 2.7
21 53 45.3	9.4	54 30.04	53 0.2	11 10.85	-23.34	-0 9.27	+12.47	-1.50	-26.30	21 54 27.69	54 13 11.6
21 54 58.3	7.5	55 43.06	55 15.5	59 9.95	-21.50	-0 9.26	+12.42	-1.52	-26.30	21 55 40.71	54 25 14.4
21 56 7.0	8.9	56 52.32	56 21.1	37 47.30	-24.10	-0 9.26	+12.83	-1.53	-26.40	21 56 49.93	54 46 35.0
21 58 10.3	7.5	58 55.38	58 29.8	7 54.20	-20.02	-0 9.26	+12.41	-1.56	-26.35	21 58 53.10	54 16 32.2
21 59 47.6	9.0	0 32.50	59 53.5	55 56.00	-30.34	-0 9.26	+12.63	-1.58	-26.35	22 0 30.22	54 28 20.6
22 1 6.2	8.2	1 51.34	1 18.7	46 4.65	-25.27	-0 9.26	+12.93	-1.59	-26.40	22 1 49.06	54 38 17.5
22 2 47.2	8.8	3 32.56	2 1.0	4 17.85	-24.67	-0 9.26	+12.24	-1.62	-26.35	22 3 30.34	54 20 4.6
22 4 8.8	8.1	4 54.28	4 25.2	51 8.30	-23.15	-0 9.27	+11.77	-1.63	-26.30	22 4 52.18	53 33 15.4
22 4 52.3	7.8	5 38.16	5 20.7	27 56.50	-13.79	-0 9.27	+12.15	-1.64	-26.30	22 5 36.02	53 56 37.1
22 6 18.8	8.5	7 4.52	6 34.6	45 17.55	-23.17	-0 9.26	+13.08	-1.66	-26.40	22 7 2.32	54 39 7.7
22 7 46.5	8.9	8 32.78	7 56.6	6 32.70	-28.29	-0 9.26	+12.41	-1.67	-26.35	22 8 30.66	54 17 47.1
22 9 0.6	8.5	9 47.14	9 27.7	34 44.45	-14.96	-0 9.26	+12.95	-1.69	-26.40	22 9 44.96	54 49 49.4
22 9 50.5	8.9	10 35.98	10 23.1	35 49.95	- 9.96	-0 9.26	+13.41	-1.70	-26.40	22 10 33.82	54 48 49.4
22 10 37.5	8.5	11 23.48	11 8.6	52 36.75	-11.58	-0 9.26	+12.85	-1.71	-26.40	22 11 21.37	54 32 0.6
22 11 37.8	8.8	12 24.74	12 5.1	12 37.55	-15.36	-0 9.27	+12.42	-1.72	-26.35	22 12 22.68	54 11 55.8
22 12 41.7	9.1	13 27.06	12 56.1	45 1.75	-24.02	-0 9.26	+13.09	-1.74	-26.40	22 13 24.96	54 39 23.7
22 15 11.2	8.2	15 58.36	15 40.3	44 33.20	-14.02	-0 9.26	+12.79	-1.77	-26.40	22 15 56.31	54 40 2.3
22 16 11.0	9.0	16 57.78	16 36.5	22 51.95	-17.15	-0 9.26	+11.11	-1.78	-26.25	22 16 55.70	55 1 39.1
22 18 45.1	9.8	19 33.46	19 7.3	14 26.75	-20.54	-0 9.27	+12.12	-1.81	-26.35	22 19 31.52	54 10 2.2
22 20 10.0	8.9	20 58.00	20 26.6	48 36.10	-24.36	-0 9.26	+12.63	-1.83	-26.40	22 20 56.04	54 35 49.7
22 21 8.8	8.0	21 56.60	21 30.5	32 35.25	-20.62	-0 9.27	+11.77	-1.84	-26.30	22 21 54.74	53 51 53.7
ZONE 132, NOVEMBER 2, 1871.											
22 50 58.6	8.8	51 50.20	51 23.5	23 26.50	-20.50	-0 9.34	+13.27	-2.21	-26.05	22 51 48.69	55 1 6.8
22 52 54.3	8.9	53 46.74	53 34.0	33 33.30	-10.03	-0 9.34	+12.03	-2.22	-25.90	22 53 45.38	53 51 9.6
22 54 29.3	8.6	55 21.66	54 56.3	52 10.55	-19.74	-0 9.34	+12.83	-2.25	-25.95	22 55 20.27	54 32 23.5
22 56 30.6	7.2	57 22.36	56 56.2	50 43.45	-20.34	-0 9.34	+13.02	-2.27	-25.90	22 57 21.01	54 33 50.5
22 58 0.2	9.0	58 53.66	58 30.5	59 5.10	-18.08	-0 9.34	+12.52	-2.29	-25.85	22 58 52.34	54 25 30.8
22 59 5.4	9.0	59 58.66	59 32.6	40 2.60	-20.18	-0 9.34	+13.29	-2.31	-25.85	22 59 57.33	54 44 32.0

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	° ' "	"	m s	"	s	"	h m s	° ' "
23 1 34.3	9.4	2 28.08	1 59.9	3 57.10	-22.02	-0 9.34	+12.37	-2.33	-25.80	23 2 26.84	54 20 35.0
23 3 2.8	9.1	3 57.16	3 30.8	39 42.25	-20.91	-0 9.35	+11.64	-2.33	-25.75	23 3 56.00	53 44 50.5
23 5 22.1	9.0	6 15.80	5 59.3	21 57.45	-12.66	-0 9.34	+13.56	-2.38	-25.75	23 6 14.59	55 2 45.6
23 18 51.0	7.0	19 45.22	19 21.8	40 20.80	-18.10	-0 9.34	+13.31	-2.53	-25.40	23 19 44.31	54 44 17.9
23 19 55.3	8.5	20 50.36	20 20.4	7 20.45	-23.45	-0 9.34	+12.47	-2.54	-25.30	23 20 49.50	54 17 12.3
23 20 9.0	8.5	21 5.34	20 34.4	7 20.45	-24.16	-0 9.34	+12.46	-2.54	-25.30	23 21 4.49	54 17 11.5
23 21 6.7	8.3	22 2.22	21 43.5	26 1.20	-14.37	-0 9.35	+13.58	-2.57	-25.35	23 22 1.32	54 58 41.7
23 22 18.0	9.2	23 15.84	22 44.8	21 43.50	-23.78	-0 9.35	+13.42	-2.59	-25.30	23 23 14.96	55 2 50.0
23 23 15.0	8.3	24 11.08	23 48.3	49 59.25	-17.70	-0 9.35	+13.19	-2.59	-25.25	23 24 10.25	54 34 40.1
23 24 21.5	8.5	25 18.00	24 54.6	21 9.20	-17.95	-0 9.35	+13.60	-2.61	-25.25	23 25 17.17	55 3 30.4
23 25 12.5	8.3	26 7.82	25 54.8	10 53.40	-10.18	-0 9.35	+12.74	-2.60	-25.15	23 26 7.06	54 13 53.3
23 27 20.0	8.5	28 16.10	27 44.7	36 38.40	-24.24	-0 9.35	+13.14	-2.63	-25.15	23 28 15.36	54 47 54.7
23 28 35.8	8.5	29 32.96	29 7.2	5 6.10	-20.63	-0 9.36	+11.71	-2.61	-25.00	23 29 32.32	53 19 29.4
23 30 13.5	9.3	31 12.84	30 45.0	57 9.00	-21.65	-0 9.35	+12.73	-2.66	-25.00	23 31 12.18	54 27 26.6
23 31 12.5	8.8	32 11.88	31 51.9	52 18.15	-15.54	-0 9.35	+12.92	-2.67	-24.95	23 32 11.24	54 32 23.8
23 32 21.0	9.1	33 21.16	32 55.2	49 21.70	-20.18	-0 9.35	+12.67	-2.69	-24.95	23 33 20.53	54 35 15.4
23 33 39.7	8.3	34 35.60	34 18.6	53 40.45	-13.21	-0 9.35	+12.78	-2.70	-24.90	23 34 35.01	54 31 3.8
23 34 53.4	8.5	35 51.08	35 34.4	24 28.80	-13.07	-0 9.35	+12.06	-2.70	-24.80	23 35 50.54	54 0 15.1
23 37 20.4	8.2	38 18.76	37 53.2	53 51.35	-19.90	-0 9.35	+12.65	-2.74	-24.75	23 38 18.25	54 30 46.4
23 38 58.0	9.3	39 57.50	39 29.0	3 39.95	-22.25	-0 9.35	+12.40	-2.75	-24.70	23 39 57.03	54 20 55.3
23 39 47.7	7.5	40 45.66	40 30.6	14 44.55	-11.84	-0 9.35	+12.23	-2.76	-24.65	23 40 45.21	54 10 1.0
23 41 24.9	8.0	42 23.46	42 2.0	27 25.05	-16.54	-0 9.35	+13.38	-2.80	-24.60	23 42 23.01	54 57 17.1
23 42 21.5	7.9	43 19.48	42 53.8	26 49.50	-19.75	-0 9.35	+13.43	-2.81	-24.55	23 43 19.05	54 57 49.5
23 43 24.3	8.6	44 24.06	44 0.7	59 19.50	-18.20	-0 9.35	+12.54	-2.81	-24.50	23 44 23.68	54 25 20.3
23 44 25.4	8.8	45 25.38	45 1.5	3 50.15	-18.66	-0 9.35	+12.47	-2.81	-24.45	23 45 25.03	54 20 49.2
23 46 30.0	9.2	47 29.72	46 57.0	13 12.75	-25.63	-0 9.35	+12.23	-2.83	-24.35	23 47 29.42	54 11 19.5
ZONE 133, NOVEMBER 6, 1871.											
22 31 11.7	8.5	32 0.82	31 26.9	9 13.15	-28.42	-0 9.08	+ 9.09	-1.85	-26.45	22 31 59.68	51 15 7.6
22 32 1.7	9.2	32 51.40	32 32.7	0 21.75	-15.62	-0 9.08	+ 9.90	-1.85	-26.45	22 32 50.27	51 24 12.7
22 32 51.9	9.0	33 42.38	33 37.2	14 25.45	- 4.37	-0 9.08	+ 9.28	-1.85	-26.45	22 33 41.29	51 10 19.8
22 34 5.1	9.4	34 55.54	34 28.9	20 3.65	-21.89	-0 9.07	+10.59	-1.88	-26.55	22 34 54.39	52 4 25.4
22 35 2.9	7.0	35 52.60	35 19.1	18 2.40	-28.16	-0 9.08	+ 9.07	-1.89	-26.40	22 35 51.54	51 6 19.2
22 36 9.2	8.5	36 59.38	36 28.9	30 1.60	-20.01	-0 9.07	+10.35	-1.89	-26.50	22 36 58.29	51 54 29.4
22 37 20.4	8.8	38 10.50	37 54.9	50 27.75	-12.99	-0 9.08	+10.10	-1.92	-26.55	22 38 9.43	51 34 10.1
22 38 16.3	9.0	39 7.54	38 44.0	52 22.20	-19.58	-0 9.08	+ 9.78	-1.93	-26.45	22 39 6.49	51 32 9.0
22 39 46.5	9.0	40 36.72	40 5.8	31 53.35	-25.38	-0 9.08	+10.11	-1.95	-26.50	22 40 35.66	51 52 32.5
22 40 54.2	9.1	41 45.48	41 16.3	52 7.05	-24.32	-0 9.08	+ 9.73	-1.96	-26.45	22 41 44.47	51 32 19.7
22 41 47.1	6.5	42 38.80	42 10.6	5 16.20	-23.60	-0 9.08	+ 9.70	-1.97	-26.40	22 42 37.83	51 19 11.3
22 42 54.3	8.3	43 45.38	43 10.8	5 41.05	-28.96	-0 9.08	+ 9.53	-1.98	-26.40	22 43 44.42	51 18 41.1
22 57 54.3	8.8	58 47.92	58 16.8	58 34.50	-25.97	-0 9.08	+ 9.41	-2.15	-26.20	22 58 47.21	51 25 52.3
22 59 55.5	8.4	0 49.06	0 16.9	55 43.10	-26.86	-0 9.08	+ 9.74	-2.18	-26.20	23 0 48.37	51 28 43.3
23 1 5.2	9.5	1 58.70	1 34.7	30 6.05	-19.83	-0 9.07	+10.43	-2.19	-26.25	23 1 58.02	51 54 28.1
23 3 12.2	8.8	4 7.28	3 30.1	57 53.70	-31.05	-0 9.07	+ 9.37	-2.21	-26.05	23 4 6.67	51 26 28.6
23 4 25.4	8.9	5 20.18	4 47.6	9 22.85	-27.33	-0 9.07	+ 9.14	-2.22	-26.10	23 5 19.60	51 15 3.0
23 5 19.2	8.8	6 13.84	5 57.7	43 4.30	-13.36	-0 9.07	+ 9.95	-2.24	-26.15	23 6 13.24	51 41 36.3
23 6 7.6	7.9	7 2.74	6 54.4	12 23.70	- 6.97	-0 9.07	+ 9.53	-2.24	-26.05	23 7 2.19	51 12 23.0
23 8 39.4	9.0	9 34.78	9 2.9	56 41.85	-26.61	-0 9.07	+ 9.64	-2.27	-26.05	23 9 34.26	51 27 45.5

ZONE 134, NOVEMBER 7, 1871.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
22 36 9.2	8.5	36 59.00	36 57.8	30 19.30	- 0.99	-0 8.58	+10.45	-1.88	-26.65	22 36 58.41	51 54 30.7
22 37 20.4	9.2	38 10.10	38 3.4	50 34.95	- 5.58	-0 8.58	+10.03	-1.89	-26.60	22 38 9.56	51 34 10.3
22 38 16.3	9.4	39 7.02	38 53.1	52 29.40	-11.58	-0 8.58	+ 9.74	-1.91	-26.55	22 39 6.49	51 32 9.7
22 39 46.5	9.0	40 36.18	40 10.3	31 57.35	-21.41	-0 8.58	+10.04	-1.92	-26.60	22 40 35.65	51 52 32.3
22 40 54.2	9.2	41 44.98	41 21.7	52 11.30	-19.40	-0 8.58	+ 9.68	-1.93	-26.55	22 41 44.50	51 32 20.2
22 41 28.6	8.5	42 19.52	42 32.3	8 18.30	+10.73	-0 8.59	+ 9.32	-1.94	-26.50	22 42 19.05	51 16 43.1
22 42 54.3	8.5	43 44.92	43 59.9	6 21.75	+12.56	-0 8.59	+ 9.60	-1.96	-26.50	22 43 44.47	51 18 41.9
22 44 55.5	8.1	45 46.08	45 23.3	48 8.30	-18.96	-0 8.58	+ 9.65	-1.98	-26.55	22 45 45.68	51 36 24.0
22 46 1.0	9.8	46 52.64	46 41.1	3 0.35	- 9.62	-0 8.58	+ 9.51	-1.99	-26.50	22 46 52.26	51 21 41.4
22 47 11.1	8.8	48 1.32	47 45.3	20 38.85	-13.17	-0 8.58	+10.52	-2.01	-26.55	22 48 0.90	52 4 0.4
22 49 1.3	9.8	49 53.44	49 22.3	11 40.50	-26.09	-0 8.59	+ 9.27	-2.03	-26.45	22 49 53.10	51 12 44.9
22 50 22.5	9.2	51 13.50	50 46.8	58 54.20	-22.29	-0 8.58	+ 9.33	-2.04	-26.45	22 51 13.18	51 25 35.2
22 52 53.8	6.2	53 46.14	53 15.8	25 24.65	-24.99	-0 8.58	+10.28	-2.08	-26.50	22 53 45.82	51 59 3.2
22 53 43.3	9.0	54 34.66	54 28.8	41 34.85	- 4.89	-0 8.58	+10.08	-2.08	-26.45	22 54 34.38	51 43 13.1
22 56 33.3	9.2	57 26.26	56 52.2	52 50.30	-28.41	-0 8.58	+ 9.44	-2.12	-26.35	22 57 26.03	51 31 33.8
22 57 54.3	8.9	58 47.52	58 14.0	57 32.85	-27.91	-0 8.58	+ 9.49	-2.13	-26.35	22 58 47.33	51 26 52.0
22 59 55.5	8.6	0 48.66	0 12.7	55 39.55	-30.02	-0 8.58	+ 9.58	-2.15	-26.30	23 0 48.50	51 28 43.5
23 1 5.2	9.5	1 58.36	1 50.9	30 19.05	- 6.20	-0 8.58	+10.42	-2.17	-26.35	23 1 58.19	51 54 28.7
23 3 12.2	9.0	4 6.84	3 45.3	58 6.50	-17.94	-0 8.58	+ 9.49	-2.19	-26.25	23 4 6.74	51 26 28.9
23 4 25.4	8.9	5 19.68	4 49.4	9 24.80	-25.40	-0 8.59	+ 9.02	-2.20	-26.25	23 5 19.60	51 15 2.8
23 5 19.2	9.0	6 13.36	5 44.8	42 52.50	-23.74	-0 8.58	+ 9.70	-2.22	-26.25	23 6 13.27	51 41 37.4
23 5 40.4	8.3	6 34.60	6 53.5	8 31.00	+15.84	-0 8.59	+ 9.29	-2.22	-26.20	23 6 34.54	51 16 38.2
23 8 5.1	...	8 58.58	8 23.9	58 27.35	-28.97	-0 8.58	+ 9.26	-2.24	-26.20	23 8 58.56	51 25 57.2
23 8 39.4	9.1	9 34.44	9 30.1	57 3.30	- 3.59	-0 8.58	+ 9.76	-2.25	-26.20	23 9 34.43	51 27 47.2
23 10 57.7	9.0	11 52.68	11 18.6	47 10.15	-28.35	-0 8.57	+ 9.61	-2.28	-26.15	23 11 52.71	51 37 15.6
23 12 6.7	9.4	13 1.44	12 51.0	42 51.85	- 8.82	-0 8.58	+ 8.78	-2.28	-26.05	23 13 1.54	50 41 52.8
23 13 0.6	9.0	13 55.68	13 53.7	24 48.95	- 1.69	-0 8.58	+ 9.50	-2.30	-25.85	23 13 55.77	51 0 3.8
23 14 18.7	9.0	15 13.06	14 51.6	31 47.95	-17.94	-0 8.57	+10.12	-2.32	-26.15	23 15 13.13	51 52 49.0
23 16 36.6	7.6	17 31.80	16 54.7	59 21.10	-30.99	-0 8.57	+ 9.08	-2.34	-26.05	23 17 31.94	51 25 2.0
23 17 48.1	9.2	18 42.90	18 24.0	41 53.75	-15.33	-0 8.56	+11.05	-2.38	-26.10	23 18 42.99	52 42 47.0
23 19 50.8	9.0	20 45.90	20 5.8	39 3.00	-32.50	-0 8.56	+10.55	-2.40	-26.05	23 20 46.03	52 45 20.3
23 20 42.6	9.6	21 38.52	21 24.7	2 10.20	-11.28	-0 8.56	+10.72	-2.41	-26.00	23 21 38.68	52 22 34.5

ZONE 135, NOVEMBER 7, 1871.

0 18 42.4	9.0	19 46.02	19 14.6	39 18.30	-26.03	-0 8.60	+ 9.63	-3.01	-23.85	0 19 47.28	51 45 12.8
0 19 51.6	8.8	20 54.22	20 29.5	38 14.25	-20.91	-0 8.61	+ 8.83	-2.99	-23.70	0 20 55.50	50 46 21.3
0 21 46.1	9.1	22 50.06	22 24.4	47 47.30	-21.37	-0 8.60	+ 9.70	-3.04	-23.70	0 22 51.38	51 36 48.5
0 23 23.8	9.2	24 28.06	24 4.1	57 18.40	-20.02	-0 8.60	+ 9.60	-3.05	-23.60	0 24 29.41	51 27 18.7
0 24 27.6	8.9	25 31.18	25 10.4	1 11.25	-17.38	-0 8.61	+ 9.68	-3.06	-23.55	0 25 32.54	51 23 28.6
0 25 44.8	9.0	26 48.98	26 21.8	26 8.70	-22.43	-0 8.61	+10.27	-3.09	-23.50	0 26 50.36	51 58 26.7
0 27 15.2	7.0	28 18.62	27 52.3	15 22.70	-22.09	-0 8.62	+ 9.44	-3.07	-23.40	0 28 20.03	51 9 12.3
0 30 8.4	9.1	31 13.46	30 59.0	50 15.40	-12.07	-0 8.61	+10.05	-3.12	-23.25	0 31 14.93	51 34 30.2
0 31 28.9	8.6	32 33.70	32 5.6	31 58.90	-23.22	-0 8.61	+10.17	-3.14	-23.20	0 32 35.20	51 52 35.7
0 32 34.4	8.5	33 39.52	33 13.4	8 44.80	-21.87	-0 8.62	+ 9.21	-3.13	-23.10	0 33 41.03	51 15 50.2
0 32 34.4	9.0	33 48.84	33 10.1	8 44.80	-32.43	-0 8.62	+ 8.99	-3.13	-23.10	0 33 50.35	51 15 39.4
0 33 38.6	8.5	34 42.88	34 26.4	57 10.85	-13.77	-0 8.61	+ 9.69	-3.14	-23.05	0 34 44.43	51 27 32.8
0 34 31.0	7.6	35 36.18	35 16.0	45 35.30	-16.79	-0 8.61	+10.03	-3.16	-23.00	0 35 37.74	51 39 5.6
0 35 45.7	8.8	36 50.90	36 19.6	51 9.80	-26.06	-0 8.61	+ 9.73	-3.17	-22.90	0 36 52.48	51 33 21.6
0 37 12.1	9.0	38 17.56	37 48.2	59 42.50	-24.55	-0 8.62	+ 9.22	-3.18	-22.85	0 38 19.16	51 24 49.8
0 38 57.6	8.9	40 2.32	39 38.9	34 45.05	-19.36	-0 8.62	+ 9.77	-3.21	-22.80	0 40 3.96	51 49 53.0

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
0 39 49.0	8.3	40 55.38	40 35.0	49 8.65	-16.97	-0 8.62	+ 9.61	-3.21	-22.75	0 40 57.03	51 35 31.6
0 41 20.0	8.7	42 25.86	41 59.8	8 42.65	-21.87	-0 8.63	+ 9.22	-3.21	-22.65	0 42 27.53	51 15 52.3
0 42 48.6	8.8	43 54.32	43 26.4	47 57.80	-23.20	-0 8.62	+ 9.66	-3.24	-22.60	0 43 56.03	51 36 36.2
0 44 24.4	8.6	45 29.96	45 1.6	21 20.30	-23.39	-0 8.61	+10.34	-3.27	-22.50	0 45 31.72	52 3 14.2
0 45 27.6	9.0	46 33.00	46 0.9	23 54.05	-26.46	-0 8.61	+ 9.95	-3.28	-22.45	0 46 34.78	52 0 37.0
0 45 27.6	6.8	46 33.80	46 3.7	23 54.39	-24.81	-0 8.61	+10.07	-3.28	-22.45	0 46 35.58	52 0 39.3
0 46 40.6	8.2	47 46.42	47 28.4	53 9.80	-15.32	-0 8.63	+ 8.54	-3.23	-22.25	0 47 48.19	50 31 31.1
0 47 52.9	7.8	48 59.82	48 34.1	35 48.35	-21.28	-0 8.63	+10.15	-3.29	-22.30	0 49 1.63	51 48 48.0
0 48 57.8	7.0	50 4.86	49 47.5	50 55.55	-14.48	-0 8.63	+ 9.96	-3.28	-22.20	0 50 6.69	51 33 47.5
0 50 33.1	8.3	51 40.24	51 8.3	33 53.10	-26.39	-0 8.62	+ 9.75	-3.31	-22.15	0 51 42.12	51 50 37.7
0 51 56.1	8.0	53 3.02	52 31.3	56 37.00	-26.45	-0 8.63	+ 9.59	-3.31	-22.05	0 53 4.90	51 27 53.6
0 52 48.6	7.8	53 55.62	53 31.7	1 43.15	-19.98	-0 8.63	+ 9.60	-3.32	-22.00	0 53 57.52	51 22 53.9
0 54 19.9	9.0	55 27.52	54 58.4	8 57.30	-24.38	-0 8.64	+ 9.14	-3.33	-21.80	0 55 29.43	51 15 34.9
ZONE 136, NOVEMBER 9, 1871.											
22 31 11.7	8.2	32 0.16	31 35.2	9 16.75	-20.96	-0 8.30	+ 9.15	-1.77	-26.80	22 31 59.88	51 15 10.5
22 32 1.7	9.0	32 50.42	32 35.4	0 20.80	-12.53	-0 8.30	+ 9.87	-1.78	-26.80	22 32 50.14	51 24 15.7
22 32 51.9	8.9	33 41.44	33 27.3	14 13.10	-11.84	-0 8.30	+ 9.19	-1.79	-26.80	22 33 41.19	51 10 23.5
22 34 5.1	9.4	34 54.90	34 29.0	20 0.10	-21.31	-0 8.29	+10.55	-1.80	-26.90	22 34 54.61	52 4 28.5
22 35 2.9	6.0	35 51.92	35 23.9	18 3.10	-23.54	-0 8.30	+ 9.07	-1.81	-26.80	22 35 51.72	51 6 22.0
22 36 9.2	8.5	36 58.60	36 37.8	30 2.65	-17.18	-0 8.29	+10.42	-1.83	-26.90	22 36 58.35	51 54 30.2
22 37 20.4	9.1	38 9.64	37 49.6	50 22.25	-16.65	-0 8.30	+10.00	-1.84	-26.85	22 38 9.43	51 34 10.9
22 38 16.3	9.3	39 6.72	38 43.3	52 21.15	-19.49	-0 8.30	+ 9.72	-1.85	-26.80	22 39 6.53	51 32 9.0
22 39 46.5	9.0	40 35.90	40 6.0	31 52.50	-24.72	-0 8.30	+10.05	-1.87	-26.85	22 40 35.70	51 52 32.9
22 40 54.2	9.2	41 44.58	41 12.2	52 3.25	-26.98	-0 8.30	+ 9.61	-1.88	-26.80	22 41 44.43	51 32 19.7
22 41 47.1	8.0	42 38.02	42 55.7	5 54.09	+14.83	-0 8.31	+ 9.40	-1.89	-26.80	22 42 37.90	51 19 10.5
22 44 55.5	6.5	45 45.94	45 12.8	47 58.80	-27.52	-0 8.30	+ 9.57	-1.93	-26.80	22 45 45.85	51 36 23.9
22 46 1.0	9.7	46 52.44	46 29.8	2 47.60	-18.90	-0 8.30	+ 9.48	-1.94	-26.75	22 46 52.39	51 21 43.9
22 47 11.1	8.4	48 1.08	47 36.2	20 31.03	-20.50	-0 8.30	+10.49	-1.96	-26.80	22 48 0.99	52 3 59.9
22 49 1.3	9.4	49 53.16	49 14.5	11 32.75	-32.46	-0 8.32	+ 9.18	-1.98	-26.70	22 49 53.14	51 12 45.2
22 50 22.5	9.0	51 13.10	50 41.0	58 49.00	-26.80	-0 8.31	+ 9.30	-2.00	-26.70	22 51 13.09	51 25 34.9
22 52 53.8	6.5	53 45.84	53 14.2	25 23.15	-26.07	-0 8.30	+10.32	-2.03	-26.75	22 53 45.85	51 59 2.7
22 53 43.3	9.0	54 34.42	54 14.0	41 21.65	-16.93	-0 8.31	+10.06	-2.04	-26.70	22 54 34.45	51 43 13.2
22 55 17.3	...	56 10.46	...	...	...	-0 8.30	...	-2.07	...	22 56 10.53	...
22 56 33.3	9.2	57 26.12	56 54.0	52 52.30	-26.74	-0 8.30	+ 9.53	-2.06	-26.65	22 57 26.22	51 31 32.6
22 59 55.5	8.5	0 48.28	0 16.7	55 42.60	-26.35	-0 8.31	+ 9.71	-2.10	-26.55	23 0 48.44	51 28 43.2
23 1 5.2	9.6	1 57.95	1 58.6	30 26.50	+ 1.00	-0 8.31	+10.47	-2.13	-26.60	23 1 58.09	51 54 27.5
23 3 12.2	9.0	4 6.46	3 34.1	57 56.05	-27.04	-0 8.31	+ 9.40	-2.15	-26.55	23 4 6.67	51 26 29.1
23 4 25.4	9.2	5 19.42	4 46.4	9 20.35	-27.66	-0 8.33	+ 9.07	-2.16	-26.50	23 5 19.64	51 15 4.0
23 5 19.2	9.0	6 13.12	5 48.8	42 55.35	-20.17	-0 8.32	+ 9.81	-2.18	-26.55	23 6 13.33	51 41 37.2
23 6 7.6	8.0	7 1.92	6 34.1	12 6.45	-23.33	-0 8.33	+ 9.32	-2.18	-26.50	23 7 2.17	51 12 22.6
23 8 5.1	8.9	8 58.30	8 26.3	58 29.25	-26.72	-0 8.32	+ 9.35	-2.20	-26.45	23 8 58.58	51 25 56.6
23 10 57.7	9.2	11 52.26	11 21.8	47 11.75	-25.35	-0 8.32	+ 9.71	-2.24	-26.45	23 11 52.58	51 37 16.1
23 12 6.7	9.2	13 1.00	12 26.4	42 29.55	-29.35	-0 8.33	+ 8.58	-2.24	-26.35	23 13 1.39	50 41 53.3
23 14 18.7	9.2	15 12.82	14 45.0	31 41.35	-22.98	-0 8.32	+10.12	-2.28	-26.40	23 15 13.18	51 52 49.6
23 16 36.6	7.5	17 31.50	17 2.1	59 28.00	-24.55	-0 8.32	+ 9.26	-2.30	-26.30	23 17 31.93	51 25 0.7
23 17 48.1	9.0	18 42.68	18 19.8	41 48.70	-18.58	-0 8.31	+11.08	-2.34	-26.45	23 18 43.06	52 42 47.8
23 19 50.8	8.8	20 45.68	20 19.2	39 12.85	-21.47	-0 8.31	+10.81	-2.36	-26.40	23 20 46.10	52 45 20.6
23 20 42.6	9.7	21 38.30	21 29.5	2 14.15	- 7.19	-0 8.31	+10.78	-2.36	-26.35	23 21 38.76	52 22 33.6

ZONE 137, NOVEMBER 9, 1871.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R.A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
0 16 26.6	6.0	17 30.70	17 3.0	4 57.00	-23.18	-0 8.39	+ 9.69	-2.95	-24.35	0 17 32.16	51 19 37.6
0 17 50.6	9.1	18 52.98	18 26.9	5 38.35	-21.85	-0 8.39	+ 9.64	-2.96	-24.30	0 18 54.47	51 18 57.6
0 19 51.6	9.2	20 54.12	20 22.8	38 9.00	-26.50	-0 8.40	+ 8.71	-2.96	-24.15	0 20 55.64	50 46 21.4
0 21 46.1	9.0	22 49.74	22 39.4	48 1.35	- 8.56	-0 8.39	+ 9.85	-3.01	-24.15	0 22 51.30	51 36 48.1
0 23 23.8	9.2	24 27.86	23 57.2	57 14.10	-25.61	-0 8.39	+ 9.51	-3.02	-24.05	0 24 29.45	51 27 18.0
0 24 27.6	8.8	25 30.96	25 6.3	1 6.40	-20.64	-0 8.39	+ 9.66	-3.03	-24.00	0 25 32.57	51 23 30.8
0 25 44.8	8.9	26 48.78	26 23.5	26 9.05	-20.87	-0 8.39	+10.31	-3.06	-23.95	0 26 50.41	51 58 28.6
0 27 15.2	6.8	28 18.38	27 50.5	15 19.30	-23.44	-0 8.39	+ 9.44	-3.04	-23.80	0 28 20.05	51 9 15.0
0 28 56.9	10.0	30 1.48	29 36.2	43 5.80	-21.01	-0 8.39	+ 9.76	-3.08	-23.80	0 30 3.18	51 41 31.2
0 30 8.4	9.1	31 13.04	30 46.8	50 4.40	-21.80	-0 8.39	+ 9.96	-3.09	-23.70	0 31 14.76	51 34 32.0
0 31 28.9	8.7	32 33.28	32 0.2	31 53.15	-27.35	-0 8.39	+10.00	-3.12	-23.65	0 32 35.02	51 52 37.8
0 32 34.4	8.8	33 39.14	33 11.8	8 43.15	-22.88	-0 8.39	+ 9.20	-3.10	-23.55	0 33 40.91	51 15 51.5
0 32 34.4	9.0	33 48.58	33 8.2	8 43.15	-33.85	-0 8.39	+ 8.96	-3.10	-23.55	0 33 50.35	51 15 40.3
0 33 38.6	8.5	34 42.58	34 20.9	57 7.12	-18.10	-0 8.39	+ 9.66	-3.12	-23.45	0 34 44.37	51 27 32.8
0 34 31.0	6.5	35 36.04	35 18.0	45 36.35	-14.96	-0 8.39	+10.07	-3.14	-23.40	0 35 37.84	51 39 7.1
0 35 45.7	8.9	36 50.58	36 16.5	51 6.80	-28.39	-0 8.39	+ 9.69	-3.14	-23.30	0 36 52.41	51 33 22.9
0 37 12.1	8.9	38 17.38	37 45.8	59 41.30	-26.39	-0 8.39	+ 9.20	-3.16	-23.20	0 38 19.23	51 24 49.9
0 38 57.6	8.8	40 2.08	39 36.1	34 42.45	-21.52	-0 8.39	+ 9.75	-3.19	-23.25	0 40 3.97	51 49 54.0
0 39 49.0	8.3	40 55.04	40 30.3	49 4.35	-20.55	-0 8.39	+ 9.56	-3.19	-23.15	0 40 56.94	51 35 32.9
0 41 20.0	8.0	42 25.78	41 57.8	8 41.05	-23.46	-0 8.39	+ 9.19	-3.19	-23.05	0 42 27.71	51 15 52.9
0 42 48.6	8.8	43 54.04	43 25.4	47 55.40	-23.78	-0 8.39	+ 9.66	-3.22	-22.95	0 43 56.00	51 36 38.8
0 44 24.4	8.5	45 29.74	44 57.1	21 17.90	-26.85	-0 8.38	+10.28	-3.25	-22.85	0 45 31.75	52 3 13.8
0 45 27.6	9.5	46 32.76	46 2.3	23 56.60	-25.14	-0 8.38	+ 9.98	-3.27	-22.80	0 46 34.78	52 0 36.5
0 45 27.6	6.8	46 33.52	46 7.2	23 56.60	-21.68	-0 8.38	+10.05	-3.27	-22.80	0 46 35.54	52 0 40.0
0 46 40.6	8.7	47 46.18	47 23.3	53 5.60	-19.49	-0 8.40	+ 8.51	-3.22	-22.60	0 47 48.19	50 31 31.8
0 47 52.9	8.2	48 59.54	48 31.1	35 44.75	-23.51	-0 8.39	+10.11	-3.28	-22.60	0 49 1.60	51 48 50.1
0 48 57.8	7.5	50 4.56	49 37.7	50 47.45	-22.39	-0 8.39	+ 9.87	-3.28	-22.55	0 50 6.63	51 33 48.3
0 50 33.1	8.7	51 40.02	51 2.8	33 49.80	-30.77	-0 8.38	+ 9.66	-3.31	-22.40	0 51 42.14	51 50 37.4
0 51 56.1	8.3	53 2.68	52 33.8	56 40.65	-24.11	-0 8.39	+ 9.62	-3.31	-22.30	0 53 4.80	51 27 53.1
0 52 48.6	8.0	53 55.34	53 29.4	1 41.25	-21.65	-0 8.39	+ 9.59	-3.32	-22.25	0 53 57.48	51 22 54.9
0 54 19.9	....	55 27.26	55 4.8	9 3.80	-18.85	-0 8.39	+ 9.23	-3.32	-22.10	0 55 29.43	51 15 34.8

ZONE 138, NOVEMBER 19, 1871.

22 44 43.6	7.8	45 30.77	45 47.5	27 59.75	+14.09	-0 5.09	+ 9.19	-1.67	-27.55	22 45 34.19	50 57 3.9
22 47 18.8	8.2	48 7.14	47 47.8	32 32.90	-16.31	-0 5.10	+ 9.12	-1.71	-27.55	22 48 10.60	50 52 0.6
22 49 11.2	9.1	50 0.22	49 34.0	28 46.20	-22.11	-0 5.09	+ 8.98	-1.73	-27.55	22 50 3.71	50 55 41.6
22 51 12.4	8.7	52 0.94	51 37.2	24 43.40	-19.97	-0 5.09	+ 8.99	-1.76	-27.60	22 52 4.45	50 59 46.7
22 55 25.5	7.8	56 14.80	55 42.8	13 39.00	-27.44	-0 5.10	+ 8.06	-1.81	-27.45	22 56 18.42	50 10 43.2
22 57 54.2	9.4	58 44.46	58 51.7	34 20.65	+ 6.09	-0 5.19	+ 9.01	-1.84	-27.55	22 58 47.98	50 50 36.2
22 59 40.9	9.4	0 31.16	0 12.9	54 22.00	-15.59	-0 5.09	+ 9.51	-1.86	-27.50	23 0 34.83	50 30 13.9
23 1 48.6	8.2	2 37.88	2 3.5	53 9.15	-29.28	-0 5.09	+ 8.45	-1.89	-27.50	23 2 41.58	50 31 12.2
23 4 16.5	8.6	5 6.68	4 35.3	36 13.50	-26.57	-0 5.09	+ 9.04	-1.92	-27.55	23 5 10.40	50 48 11.3
23 6 55.8	9.3	7 46.24	7 28.8	33 24.70	-14.71	-0 5.09	+ 9.04	-1.95	-27.50	23 7 50.00	50 51 12.2
23 9 24.0	9.3	10 14.62	9 44.8	14 18.50	-25.56	-0 5.10	+ 8.02	-1.98	-27.40	23 10 18.45	50 10 6.8
23 12 6.7	9.1	12 57.58	13 19.7	43 17.15	+18.75	-0 5.09	+ 8.85	-2.02	-27.45	23 13 1.43	50 41 53.4
23 13 53.8	9.0	14 45.74	14 36.8	35 41.00	- 7.53	-0 5.09	+ 9.37	-2.04	-27.45	23 14 49.61	50 49 4.0
23 16 3.9	7.6	16 54.90	16 39.6	2 54.25	-13.07	-0 5.10	+ 8.58	-2.06	-27.35	23 16 58.82	50 21 44.6
23 18 16.6	9.0	19 8.18	18 48.0	5 55.05	-17.27	-0 5.10	+ 8.80	-2.09	-27.35	23 19 12.13	50 18 40.0
23 21 23.1	7.8	22 15.18	22 9.9	44 16.05	- 4.50	-0 5.10	+ 8.83	-2.13	-27.35	23 22 19.17	50 40 32.0
23 23 42.3	9.0	24 33.40	24 10.2	7 11.60	-19.85	-0 5.10	+ 8.49	-2.15	-27.30	23 24 37.45	50 17 20.9

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
23 25 41.6	8.0	26 34.66	26 1.9	6 9.95	-28.05	-0 5.10	+ 8.48	-2.18	-27.25	23 26 38.73	50 18 14.5
23 27 44.6	8.7	28 37.24	28 4.6	43 21.15	-27.65	-0 5.09	+ 8.66	-2.20	-27.30	23 28 41.35	50 41 4.0
23 29 34.2	8.5	30 27.00	30 2.1	58 23.95	-21.24	-0 5.10	+ 8.49	-2.23	-27.20	23 30 31.13	50 26 7.6
23 31 49.7	8.8	32 43.60	32 5.4	34 35.50	-32.30	-0 5.10	+ 8.57	-2.26	-27.25	23 32 47.75	50 49 45.1
23 34 11.7	8.0	35 5.10	34 38.9	24 59.00	-22.08	-0 5.10	+ 9.49	-2.29	-27.25	23 35 9.28	50 59 32.8
23 36 19.2	8.0	37 12.68	36 40.5	11 32.00	-27.59	-0 5.11	+ 8.33	-2.31	-27.05	23 37 16.91	50 12 53.4
23 38 59.7	9.4	39 54.58	39 33.6	49 52.85	-17.86	-0 5.10	+ 8.98	-2.34	-27.05	23 39 58.86	50 34 43.1
23 42 5.7	9.0	42 59.84	42 28.0	5 39.00	-27.19	-0 5.11	+ 9.55	-2.37	-26.95	23 43 4.17	50 18 48.3
23 43 56.4	8.0	44 51.16	44 29.4	45 46.40	-18.51	-0 5.10	+ 9.06	-2.40	-26.95	23 44 55.52	50 38 49.2
23 46 17.2	9.0	47 12.56	46 44.8	35 33.25	-23.52	-0 5.10	+ 9.20	-2.43	-26.90	23 47 16.95	50 48 57.5
23 46 19.3	7.0	47 13.82	47 33.9	35 33.25	+17.01	-0 5.10	+ 9.30	-2.43	-26.90	23 47 18.21	50 49 38.2
23 48 4.3	9.0	49 0.36	48 49.1	13 51.55	-9.69	-0 5.11	+ 8.30	-2.45	-26.80	23 49 4.78	50 10 52.3
23 50 44.5	8.7	51 40.40	51 7.6	15 57.45	-28.15	-0 5.11	+ 8.31	-2.47	-26.70	23 51 44.88	50 8 28.1
ZONE 139, NOVEMBER 22, 1871.											
22 44 43.6	7.5	45 29.96	45 1.4	27 20.00	-24.13	-0 4.32	+ 8.92	-1.60	-27.70	22 45 34.22	50 57 4.1
22 49 11.2	9.0	49 59.34	49 26.9	28 40.20	-27.34	-0 4.32	+ 8.72	-1.65	-27.70	22 50 3.68	50 55 41.0
22 51 12.4	8.8	52 0.00	51 35.2	24 40.55	-20.90	-0 4.33	+ 8.80	-1.68	-27.75	22 52 4.35	50 59 47.3
22 52 26.0	8.3	53 14.38	53 6.0	3 44.20	-7.18	-0 4.34	+ 8.29	-1.67	-27.65	22 53 18.81	50 20 57.1
22 55 25.5	7.5	56 13.92	55 41.3	13 37.50	-27.96	-0 4.34	+ 7.84	-1.73	-27.65	22 56 18.38	50 10 42.8
22 57 54.2	9.3	58 43.54	58 12.9	33 48.90	-25.88	-0 4.33	+ 8.63	-1.76	-27.75	22 58 48.00	50 50 34.4
22 59 40.9	9.6	0 30.24	0 17.3	54 25.65	-10.99	-0 4.33	+ 8.37	-1.79	-27.70	23 0 34.74	50 30 12.5
23 1 48.6	8.5	2 37.04	2 4.2	53 9.70	-27.92	-0 4.33	+ 8.28	-1.82	-27.70	23 2 41.57	50 31 11.6
23 4 16.5	8.5	5 5.80	4 32.7	36 10.75	-28.01	-0 4.33	+ 8.82	-1.84	-27.75	23 5 10.36	50 48 11.2
23 6 55.8	9.2	7 45.44	7 22.1	33 19.20	-19.70	-0 4.33	+ 8.80	-1.88	-27.75	23 7 50.03	50 51 11.3
23 9 24.0	9.3	10 13.80	9 42.0	14 15.00	-27.27	-0 4.34	+ 7.78	-1.91	-27.65	23 10 18.46	50 10 7.1
23 16 3.9	8.0	16 54.06	16 22.3	2 38.80	-27.16	-0 4.33	+ 8.18	-1.99	-27.65	23 16 58.82	50 21 44.3
23 21 23.1	7.5	22 14.28	21 41.5	43 50.70	-27.83	-0 4.34	+ 8.36	-2.06	-27.65	23 22 19.10	50 40 32.3
23 23 42.3	9.6	24 32.60	24 5.3	7 8.30	-23.35	-0 4.35	+ 8.22	-2.09	-27.55	23 24 37.46	50 17 19.3
23 25 41.6	...	26 33.88	26 8.5	6 14.45	-21.72	-0 4.35	+ 8.37	-2.11	-27.55	23 26 38.77	50 18 15.0
23 27 44.6	...	28 36.48	28 16.0	43 31.10	-17.47	-0 4.34	+ 8.60	-2.14	-27.60	23 28 41.40	50 41 2.9
23 29 34.2	...	30 26.30	30 18.9	58 36.65	-6.31	-0 4.34	+ 8.40	-2.16	-27.50	23 30 31.26	50 26 8.5
23 31 49.7	8.8	32 42.72	32 14.6	34 43.85	-23.76	-0 4.34	+ 8.55	-2.19	-27.55	23 32 47.70	50 49 44.0
23 34 11.7	7.9	35 4.22	34 32.9	24 53.75	-26.38	-0 4.34	+ 8.68	-2.22	-27.55	23 35 9.23	50 59 31.7
23 36 19.2	7.8	37 11.84	36 42.3	11 32.75	-25.28	-0 4.35	+ 8.17	-2.24	-27.40	23 37 16.90	50 12 53.5
23 42 5.7	9.3	42 59.00	42 35.0	5 45.25	-20.52	-0 4.36	+ 8.46	-2.31	-27.30	23 43 4.14	50 18 46.4
23 43 56.4	8.2	44 50.24	44 21.7	45 38.65	-24.20	-0 4.35	+ 8.78	-2.34	-27.30	23 44 55.41	50 38 49.6
23 46 17.2	9.2	47 11.74	46 35.4	35 24.40	-30.71	-0 4.35	+ 8.86	-2.37	-27.30	23 47 16.94	50 48 57.5
23 46 19.3	7.0	47 12.99	47 24.7	35 24.40	+9.90	-0 4.35	+ 9.18	-2.37	-27.30	23 47 18.19	50 49 38.4
23 48 4.3	9.5	48 59.60	48 26.9	14 22.90	+23.41	-0 4.36	+ 7.85	-2.38	-27.15	23 49 4.84	50 10 52.3
23 50 44.5	9.2	51 39.66	51 10.7	16 4.10	-19.74	-0 4.36	+ 8.22	-2.41	-27.10	23 51 44.95	50 8 28.4
ZONE 140, NOVEMBER 23, 1871.											
23 50 44.5	8.8	51 39.28	51 3.1	15 53.35	-31.06	-0 4.24	+ 8.35	-2.39	-27.20	23 51 44.71	50 8 27.6
23 52 49.2	8.9	53 44.42	53 13.0	49 10.30	-26.69	-0 4.23	+ 8.64	-2.41	-27.25	23 53 49.89	50 35 15.3
23 55 15.5	7.9	56 10.36	55 32.5	37 46.35	-32.09	-0 4.23	+ 8.88	-2.45	-27.20	23 56 15.86	50 46 34.2
23 57 30.5	8.0	58 26.26	57 47.0	55 16.00	-33.48	-0 4.23	+ 8.78	-2.48	-27.10	23 58 31.79	50 29 3.1
0 2 16.6	9.1	3 13.32	2 49.3	21 32.65	-20.64	-0 4.23	+ 8.39	-2.53	-26.90	0 3 18.94	50 2 59.1
0 4 16.7	9.1	5 13.72	4 50.1	6 55.95	-20.19	-0 4.22	+ 8.65	-2.56	-26.90	0 5 19.37	50 17 36.5
0 7 4.8	8.0	8 1.16	7 28.9	29 6.65	-27.26	-0 4.22	+ 9.02	-2.60	-26.90	0 8 6.86	50 55 19.1

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.			Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.		R. A.	Dec.		
h m s		m s	m s	' "	"	m s	s	s	s	"	h m s	° ' "
0 10 11.4	8.7	11 8.36	10 35.4	1 36.70	-28.18	-0 4.22	+ 8.62	-2.63	-26.75		0 11 14.11	50 22 47.8
0 12 35.2	8.9	13 32.92	13 10.1	25 55.65	-19.63	-0 4.23	+ 8.39	-2.65	-26.60		0 13 38.70	49 58 37.3
0 15 31.9	8.3	16 28.96	15 57.0	54 21.70	-27.26	-0 4.22	+ 8.50	-2.70	-26.60		0 16 34.79	50 30 3.7
0 17 31.9	9.1	18 29.34	18 4.9	31 52.85	-20.62	-0 4.22	+ 9.34	-2.73	-26.55		0 18 35.20	50 52 40.0
0 21 55.8	8.3	22 54.72	22 19.0	29 3.95	-29.48	-0 4.22	+ 10.12	-2.81	-26.55		0 23 0.66	51 55 20.7
0 24 38.2	7.9	25 38.12	25 10.5	59 41.40	-23.55	-0 4.22	+ 8.42	-2.80	-26.25		0 25 44.11	50 24 47.7
0 26 39.6	8.0	27 37.50	27 8.1	38 47.25	-24.90	-0 4.22	+ 8.92	-2.81	-26.20		0 27 43.55	50 45 40.9
0 29 3.0	9.2	30 2.04	29 34.9	24 12.10	-23.32	-0 4.23	+ 7.99	-2.84	-26.00		0 30 8.09	50 0 16.8
0 31 5.5	8.1	32 4.98	31 28.2	3 56.70	-31.45	-0 4.22	+ 8.26	-2.87	-26.00		0 32 11.08	50 20 24.3
0 32 52.0	8.5	33 51.30	33 23.7	6 29.90	-23.61	-0 4.22	+ 8.64	-2.89	-25.90		0 33 57.43	50 17 59.3
0 34 45.6	8.5	35 45.40	35 12.1	39 39.70	-27.61	-0 4.21	+ 9.91	-2.95	-26.00		0 35 51.58	51 44 46.6
0 38 8.0	9.2	39 8.46	38 41.9	32 58.70	-22.48	-0 4.22	+ 9.15	-2.96	-25.75		0 39 14.68	50 51 32.0
0 41 50.1	9.0	42 51.62	42 18.8	52 25.00	-27.92	-0 4.22	+ 8.74	-3.00	-25.55		0 42 57.90	50 31 59.8
0 43 40.9	7.8	44 41.58	44 10.3	18 46.55	-26.89	-0 4.23	+ 8.08	-3.00	-25.40		0 44 47.88	50 5 38.6
0 45 59.7	9.3	47 1.14	46 29.1	15 29.95	-27.46	-0 4.23	+ 8.50	-3.03	-25.30		0 47 7.47	50 8 55.0
0 48 38.2	8.7	49 40.78	49 4.0	40 59.05	-31.19	-0 4.22	+ 9.04	-3.08	-25.25		0 49 47.17	50 43 22.6
0 51 57.7	8.4	53 1.08	52 28.3	28 24.80	-27.68	-0 4.22	+ 9.12	-3.12	-25.10		0 53 7.54	50 56 0.3
0 53 54.2	...	54 56.32	.....	.....	.....	-0 4.22	.....	-3.12	.....		0 55 2.80	.....
0 54 15.5	9.1	55 18.36	55 30.0	4 7.65	+ 9.91	-0 4.22	+ 8.58	-3.12	-24.90		0 55 24.85	50 20 54.5
0 56 18.7	6.5	57 22.14	56 48.2	4 2.85	-28.88	-0 4.22	+ 8.29	-3.14	-24.80		0 57 28.66	50 20 20.2
1 0 59.5	...	2 3.36	1 27.2	29 47.55	-30.56	-0 4.22	+ 8.86	-3.22	-24.80		1 2 9.97	50 54 34.0

ZONE 141, NOVEMBER 25, 1871.

23 50 44.5	8.6	51 38.42	51 25.4	16 13.30	-11.16	-0 3.37	+ 8.49	-2.35	-27.40	23 51 44.76	50 8 27.8
23 52 49.2	8.6	53 43.60	53 17.5	49 14.15	-22.19	-0 3.36	+ 8.56	-2.37	-27.45	23 53 49.98	50 35 16.0
23 55 15.5	7.6	56 9.52	55 48.9	38 0.10	-17.44	-0 3.36	+ 8.97	-2.41	-27.45	23 56 15.93	50 46 35.2
23 57 30.5	8.2	58 25.38	57 52.2	55 18.70	-28.28	-0 3.36	+ 8.74	-2.44	-27.35	23 58 31.82	50 29 5.6
0 0 8.3	8.0	1 2.84	0 28.1	19 46.75	-28.56	-0 3.35	+ 10.05	-2.48	-27.50	0 1 9.33	52 4 38.4
0 2 16.6	9.2	3 12.46	3 2.7	21 44.20	- 8.43	-0 3.37	+ 8.35	-2.49	-27.15	0 3 18.98	50 2 59.8
0 4 16.7	9.2	5 12.78	4 51.2	6 56.05	-18.48	-0 3.37	+ 8.53	-2.52	-27.15	0 5 19.32	50 17 38.0
0 7 4.8	8.0	8 0.30	7 25.0	29 3.25	-29.79	-0 3.36	+ 8.79	-2.56	-27.20	0 8 6.90	50 55 19.7
0 10 11.4	8.5	11 7.40	10 41.7	1 42.50	-21.95	-0 3.36	+ 8.58	-2.59	-27.00	0 11 14.05	50 22 48.2
0 12 35.2	8.6	13 32.14	13 1.8	25 48.65	-26.09	-0 3.37	+ 8.15	-2.61	-26.90	0 13 38.82	49 58 37.6
0 15 31.9	8.5	16 28.12	16 2.0	54 25.90	-22.23	-0 3.36	+ 8.44	-2.65	-26.85	0 16 34.86	50 30 4.4
0 17 31.9	9.3	18 28.48	18 5.6	31 53.10	-19.35	-0 3.36	+ 9.20	-2.69	-26.85	0 18 35.24	50 52 40.8
0 21 55.8	8.1	22 53.84	22 26.7	29 10.05	-22.38	-0 3.36	+ 10.06	-2.77	-26.85	0 23 0.68	51 55 21.6
0 24 38.2	7.8	25 37.26	25 4.7	59 35.75	-27.82	-0 3.36	+ 8.20	-2.76	-26.50	0 25 44.15	50 24 48.8
0 26 39.6	8.5	27 36.66	27 8.5	38 47.55	-23.89	-0 3.36	+ 8.77	-2.79	-26.45	0 27 43.59	50 45 41.5
0 29 3.0	8.8	30 1.20	29 26.4	24 6.20	-29.95	-0 3.37	+ 7.74	-2.81	-26.30	0 30 8.14	50 0 15.8
0 31 5.5	7.8	32 4.10	31 27.6	3 56.15	-31.19	-0 3.37	+ 8.11	-2.83	-26.25	0 32 11.09	50 20 24.9
0 32 52.0	8.8	33 50.44	33 22.2	6 28.45	-24.12	-0 3.37	+ 8.49	-2.85	-26.20	0 33 57.46	50 18 0.0
0 34 45.6	8.5	35 44.62	35 19.9	39 45.95	-20.48	-0 3.35	+ 9.85	-2.92	-26.30	0 35 51.69	51 44 47.3
0 38 8.0	9.2	39 7.58	38 32.5	32 49.90	-29.67	-0 3.36	+ 8.88	-2.93	-26.05	0 39 14.69	50 51 33.3
0 39 51.5	10.2	40 51.96	40 42.7	17 54.45	- 7.65	-0 3.37	+ 8.31	-2.93	-25.90	0 40 59.08	50 6 50.2
0 41 50.1	8.7	42 50.80	42 29.5	52 34.45	-18.13	-0 3.36	+ 8.72	-2.97	-25.85	0 42 57.97	50 32 0.1
0 43 40.9	7.2	44 40.72	44 8.9	18 44.05	-27.32	-0 3.37	+ 7.94	-2.97	-25.70	0 44 47.91	50 5 40.4
0 45 59.7	9.2	47 0.24	46 40.8	15 38.50	-16.65	-0 3.37	+ 8.51	-3.00	-25.60	0 47 7.46	50 8 57.3
0 48 38.2	8.6	49 39.90	49 10.7	41 4.00	-24.75	-0 3.36	+ 9.00	-3.05	-25.55	0 49 47.18	50 43 24.0
0 51 57.7	8.5	53 0.26	52 26.5	28 23.90	-28.53	-0 3.36	+ 8.93	-3.09	-25.40	0 53 7.61	50 56 0.2
0 53 54.2	....	54 55.32	.....	.....	.....	-0 3.36	.....	-3.10	.....	0 55 2.68	.....
0 54 15.5	9.2	55 17.46	55 37.9	4 14.95	+ 17.43	-0 3.34	+ 8.35	-3.10	-25.20	0 55 24.83	50 20 54.5
0 56 18.7	6.8	57 21.48	56 48.4	4 4.50	-28.20	-0 3.37	+ 8.15	-3.12	-25.10	0 57 28.87	50 20 19.0
0 58 30.9	8.6	59 32.06	59 0.2	29 23.00	-27.51	-0 3.37	+ 7.65	-3.13	-24.95	0 59 39.48	49 55 0.7

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
1 0 59.5	8.4	2 2.50	1 26.2	29 45.77	-30.65	-0 3.36	+ 8.11	-3.19	-25.10	1 2 10.00	50 54 34.8
ZONE 142, DECEMBER 1, 1871.											
0 7 4.8	8.0	7 56.94	7 35.7	29 15.85	-17.89	-0 0.19	+ 9.19	-2.44	-27.75	0 8 6.83	50 55 20.5
0 10 3.2	7.0	10 56.11	10 31.8	40 13.80	-20.59	-0 0.19	+ 9.36	-2.49	-27.66	0 11 6.00	50 44 20.1
0 12 48.2	9.0	13 41.24	13 28.6	59 20.90	-10.52	-0 0.17	+ 9.85	-2.53	-27.70	0 13 51.23	51 25 23.4
0 14 41.3	8.8	15 35.16	15 11.8	53 2.10	-19.49	-0 0.17	+10.06	-2.55	-27.70	0 15 45.19	51 31 33.4
0 22 18.6	8.9	23 13.00	22 53.3	35 7.10	-16.30	-0 0.16	+10.73	-2.65	-27.50	0 23 23.17	51 49 32.3
0 25 3.6	8.7	25 58.56	25 34.3	14 45.35	-20.41	-0 0.18	+ 9.42	-2.67	-27.30	0 26 8.75	51 9 48.7
0 27 0.4	9.5	27 55.76	27 37.9	23 50.10	-15.08	-0 0.17	+ 9.41	-2.70	-27.25	0 28 5.98	51 0 49.2
0 30 0.5	9.2	30 56.22	30 32.4	51 58.10	-20.25	-0 0.19	+ 8.99	-2.72	-27.05	0 31 6.47	50 32 35.7
0 31 54.7	8.8	32 50.06	32 26.5	19 50.20	-19.85	-0 0.20	+ 8.62	-2.74	-26.95	0 33 0.32	50 4 43.6
0 36 17.0	9.5	37 14.44	36 52.9	9 45.95	-18.41	-0 0.19	+ 8.33	-2.79	-26.80	0 37 24.79	50 14 49.0
0 38 32.7	9.0	39 28.27	39 2.9	24 10.45	-21.40	-0 0.17	+ 8.27	-2.84	-26.85	0 39 38.68	51 0 21.2
0 40 39.5	6.0	41 35.14	41 14.0	7 24.75	-18.06	-0 0.18	+ 8.65	-2.85	-26.65	0 41 45.56	50 17 10.7
0 42 41.7	6.5	43 38.42	43 13.0	34 55.35	-21.48	-0 0.18	+ 9.53	-2.88	-26.65	0 43 48.89	50 49 37.4
0 46 18.9	10.0	47 17.30	46 52.6	20 37.35	-20.79	-0 0.16	+ 9.73	-2.93	-26.55	0 47 27.85	51 3 56.1
0 48 38.2	9.2	49 36.62	49 10.3	41 7.45	-22.29	-0 0.18	+ 9.24	-2.95	-26.40	0 49 47.18	50 43 24.0
0 51 3.8	8.6	52 1.52	51 38.1	58 25.10	-19.96	-0 0.18	+ 8.69	-2.97	-26.25	0 52 12.11	50 26 8.2
0 52 56.8	9.3	53 56.32	53 41.1	26 27.00	-13.09	-0 0.18	+ 8.43	-2.99	-26.10	0 54 6.93	49 58 12.9
0 55 13.9	9.5	56 12.46	55 52.3	55 44.20	-17.21	-0 0.18	+ 9.09	-3.03	-26.05	0 56 23.11	50 28 52.1
0 59 24.1	8.7	0 23.44	59 59.4	26 7.90	-19.80	-0 0.14	+10.77	-3.12	-26.10	1 0 34.25	51 58 27.0
ZONE 143, DECEMBER 2, 1871.											
0 7 4.8	8.0	7 56.16	7 30.2	29 9.75	-21.94	+0 0.57	+ 9.24	-2.42	-27.85	0 8 6.83	50 55 22.6
0 10 3.2	...	10 55.34	10 23.7	40 8.60	-26.78	+0 0.56	+ 9.35	-2.46	-27.76	0 11 6.04	50 44 19.1
0 12 8.4	8.0	13 0.10	12 37.0	21 11.65	-19.44	+0 0.55	+ 8.55	-2.47	-27.60	0 13 10.83	50 3 22.7
0 14 41.3	8.8	15 34.46	15 13.2	53 5.90	-17.74	+0 0.58	+10.11	-2.53	-27.80	0 15 45.26	51 31 31.5
0 18 42.4	9.0	19 36.54	19 7.1	39 15.40	-24.37	+0 0.59	+10.15	-2.58	-27.70	0 19 47.42	51 45 15.4
0 22 18.6	9.2	23 12.28	22 43.6	35 2.50	-23.75	+0 0.59	+10.70	-2.63	-27.60	0 23 23.22	51 49 29.4
0 25 3.6	8.9	25 57.86	25 29.6	14 41.85	-23.76	+0 0.58	+ 9.43	-2.65	-27.45	0 26 8.83	51 9 48.8
0 27 0.4	9.6	27 55.02	27 43.8	23 56.95	- 9.44	+0 0.57	+ 9.54	-2.68	-27.35	0 28 6.00	51 0 48.2
0 30 0.5	9.1	30 55.38	30 28.4	51 53.50	-22.97	+0 0.57	+ 9.02	-2.60	-27.20	0 31 6.51	50 32 37.6
0 36 17.0	9.5	37 13.68	36 57.1	9 51.30	-14.22	+0 0.56	+ 8.46	-2.67	-27.00	0 37 24.90	50 14 47.9
0 38 32.7	9.2	39 27.44	39 10.1	24 16.15	-14.58	+0 0.58	+ 9.43	-2.82	-26.95	0 39 38.62	51 0 23.5
0 40 39.5	6.0	41 34.42	41 12.0	7 23.80	-19.17	+0 0.56	+ 8.73	-2.83	-26.75	0 41 45.60	50 17 10.6
0 42 41.7	6.5	43 37.70	43 18.1	35 0.05	-16.58	+0 0.56	+ 9.67	-2.87	-26.80	0 43 48.92	50 49 37.8
0 48 38.2	9.5	49 35.88	49 14.3	41 10.10	-18.31	+0 0.57	+ 9.38	-2.94	-26.50	0 49 47.20	50 43 25.5
0 51 3.8	8.8	52 0.72	51 30.0	58 19.05	-26.19	+0 0.57	+ 8.68	-2.96	-26.35	0 52 12.07	50 26 8.0
0 52 56.8	9.5	53 55.72	54 9.6	26 48.75	+11.97	+0 0.56	+ 8.49	-2.97	-26.20	0 54 7.09	49 58 16.3
0 55 13.9	9.3	56 11.82	55 47.4	55 40.35	-20.79	+0 0.57	+ 9.13	-3.01	-26.20	0 56 23.24	50 28 52.3
0 59 24.1	8.8	0 22.80	59 58.6	26 7.15	-19.96	+0 0.58	+10.84	-3.11	-26.25	1 0 34.34	51 58 27.7
ZONE 144, DECEMBER 9, 1871.											
0 25 16.3	8.8	26 5.08	25 46.9	25 54.90	-15.35	+0 5.02	+ 9.78	-2.51	-28.00	0 26 20.63	50 58 42.1
0 27 52.4	9.2	28 42.14	28 14.5	26 28.15	-23.28	+0 5.01	+ 9.60	-2.57	-27.85	0 28 57.70	50 58 0.8
0 30 7.5	9.0	30 56.83	30 34.6	38 20.65	-18.80	+0 5.02	+ 9.22	-2.55	-27.95	0 31 12.47	50 46 12.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
0 32 15.4	9.0	33 5.24	32 42.2	16 11.95	-19.74	+0 4.99	+ 8.69	-2.59	-27.65	0 33 20.85	50 8 19.6
0 35 26.2	8.4	36 16.74	36 9.0	19 2.35	- 6.48	+0 5.01	+ 9.68	-2.65	-27.75	0 36 32.44	51 5 43.2
0 39 15.9	8.2	40 6.18	39 30.3	59 31.15	-30.63	+0 5.01	+ 8.48	-2.68	-27.55	0 40 21.93	50 24 49.0
0 39 20.7	8.4	40 11.26	39 47.3	59 31.15	-20.48	+0 5.00	+ 8.67	-2.69	-27.55	0 40 26.99	50 24 59.4
0 41 50.1	8.8	42 42.12	42 24.1	52 34.80	-15.32	+0 5.01	+ 9.11	-2.72	-27.50	0 42 57.90	50 32 1.2
.....	9.6	45 25.16	44 55.6	43 46.25	-25.12	+0 5.01	+ 8.96	-2.76	-27.45	0 45 40.99	50 40 39.8
0 46 18.9	10.0	47 11.64	47 12.0	20 58.05	+ 0.97	+0 5.01	+10.01	-2.79	-27.45	0 47 27.50	51 3 54.9
0 48 38.2	9.0	49 31.38	49 4.8	41 5.10	-22.55	+0 5.02	+ 9.39	-2.81	-27.30	0 49 47.28	50 43 23.7
1 37 7.7	8.4	38 5.93	37 45.4	0 56.45	-17.13	+0 5.04	+10.28	-3.43	-25.10	1 38 22.60	51 23 35.5
1 38 47.1	8.5	39 45.70	39 17.7	8 40.65	-23.46	+0 5.03	+ 9.73	-3.44	-25.00	1 40 2.39	51 15 44.3
1 41 12.9	8.9	42 11.92	41 57.1	3 58.55	-12.38	+0 5.04	+ 9.93	-3.47	-24.85	1 42 28.67	51 20 37.4
1 42 21.5	8.3	43 19.81	43 38.0	14 16.55	+15.28	+0 4.99	+ 9.67	-3.46	-24.65	1 43 36.53	51 10 46.8
1 44 59.4	8.4	45 58.96	45 42.5	22 16.70	-13.59	+0 5.05	+10.87	-3.55	-24.75	1 46 15.81	52 2 18.5
1 47 52.7	8.7	48 51.64	48 48.7	14 43.65	- 2.49	+0 5.01	+ 8.52	-3.50	-24.30	1 49 8.38	50 10 0.3
1 50 18.9	9.0	51 18.90	50 56.0	24 51.80	-19.71	+0 5.02	+ 8.28	-3.52	-24.10	1 51 35.67	49 59 34.5
1 52 36.8	9.0	53 37.46	53 20.7	43 30.25	-14.25	+0 5.02	+ 9.19	-3.58	-24.10	1 53 54.30	50 41 2.0
1 54 3.7	8.3	55 3.70	54 57.2	21 48.35	- 5.47	+0 5.04	+ 9.89	-3.61	-24.05	1 55 20.61	51 2 53.2
2 1 10.5	7.5	2 11.74	1 34.9	56 29.30	-31.37	+0 5.02	+ 8.87	-3.65	-23.50	2 2 28.67	50 27 44.7
2 4 45.1	8.9	5 46.16	5 28.5	28 9.20	-15.25	+0 5.02	+ 8.33	-3.67	-23.60	2 6 3.12	49 56 19.6
2 6 53.1	9.5	7 55.20	7 29.6	29 2.55	-21.61	+0 5.03	+ 9.32	-3.74	-23.15	2 8 12.27	50 55 21.0
ZONE 145, DECEMBER 12, 1871.											
0 35 26.2	8.4	36 14.60	35 41.5	18 39.70	-27.84	+0 7.15	+ 9.28	-2.58	-27.95	0 36 32.51	51 5 44.2
0 39 15.9	8.2	40 4.02	39 24.7	59 27.80	-33.54	+0 7.14	+ 8.25	-2.62	-27.75	0 40 21.96	50 24 49.3
0 39 20.7	8.4	40 9.10	39 40.5	59 27.80	-24.40	+0 7.14	+ 8.45	-2.62	-27.75	0 40 27.04	50 24 58.6
0 41 50.1	8.7	42 40.02	42 14.8	52 28.95	-21.45	+0 7.14	+ 8.86	-2.66	-27.70	0 42 57.99	50 32 0.7
0 46 18.9	9.8	47 9.50	46 48.4	20 38.40	-17.76	+0 7.15	+ 9.75	-2.73	-27.70	0 47 27.56	51 3 55.5
0 49 5.4	8.7	49 55.68	49 37.4	40 0.30	-15.51	+0 7.14	+ 9.48	-2.76	-27.50	0 50 13.77	50 44 35.6
0 52 33.7	8.0	53 23.88	52 49.5	12 3.00	-29.48	+0 7.13	+ 8.36	-2.80	-27.30	0 53 41.98	50 12 17.8
0 53 54.2	7.1	54 44.62	54 35.2	2 58.50	- 8.03	+0 7.14	+ 8.76	-2.82	-27.25	0 55 2.76	50 21 44.0
0 56 40.6	8.7	57 32.00	56 55.2	8 58.65	-31.50	+0 7.13	+ 8.17	-2.84	-27.15	0 57 50.18	50 15 19.7
1 0 41.6	8.9	1 33.00	0 58.9	28 13.20	-28.14	+0 7.18	+10.27	-2.94	-27.35	1 1 51.34	51 56 10.1
1 34 36.0	4.9	35 31.48	35 2.0	20 53.45	-25.36	+0 7.15	+ 8.40	-3.30	-25.40	1 35 50.20	50 3 28.6
1 37 7.7	8.4	38 3.78	37 32.6	0 46.60	-26.07	+0 7.19	+ 9.97	-3.38	-25.55	1 38 22.65	51 23 35.9
1 38 47.1	...	39 43.60	39 22.8	8 47.20	-17.43	+0 7.17	+ 9.64	-3.40	-25.40	1 40 2.47	51 15 43.5
1 41 12.9	9.1	42 9.68	41 47.7	3 52.05	-18.40	+0 7.18	+ 9.72	-3.43	-25.30	1 42 28.61	51 20 37.4
1 44 59.4	8.3	45 56.76	45 28.7	22 7.20	-23.14	+0 7.19	+10.62	-3.50	-25.15	1 46 15.80	52 2 18.0
1 48 0.0	9.2	48 57.66	48 23.0	5 16.95	-29.66	+0 7.15	+ 8.70	-3.47	-24.75	1 49 16.58	50 18 59.8
1 50 18.9	9.1	51 16.68	51 4.9	25 3.45	-10.16	+0 7.15	+ 8.63	-3.48	-24.55	1 51 35.62	49 59 32.6
1 52 36.8	9.4	53 35.26	53 4.5	43 18.15	-26.13	+0 7.16	+ 8.88	-3.54	-24.50	1 53 54.28	50 41 1.8
1 54 54.5	...	55 52.74	55 13.4	18 47.95	-33.06	+0 7.17	+ 9.02	-3.58	-24.45	1 56 11.83	51 5 24.8
1 57 21.7	9.2	58 19.90	57 51.8	22 59.65	-23.67	+0 7.17	+ 9.35	-3.61	-24.30	1 58 39.01	51 1 22.6
1 59 40.5	8.7	0 39.40	0 21.3	55 47.25	-15.42	+0 7.16	+ 9.07	-3.61	-23.95	2 0 58.50	50 28 42.6
2 2 8.7	8.8	3 7.56	2 36.1	20 57.50	-27.09	+0 7.15	+ 8.35	-3.61	-23.75	2 3 26.66	50 3 20.0
2 4 45.1	8.8	5 43.98	5 15.1	28 0.80	-24.90	+0 7.15	+ 8.04	-3.64	-24.00	2 6 3.10	49 56 17.9
2 6 53.1	9.5	7 53.06	7 18.3	28 55.10	-29.37	+0 7.17	+ 9.02	-3.71	-23.60	2 8 12.30	50 55 20.1
ZONE 146, DECEMBER 20, 1871.											
1 30 8.2	9.2	30 58.42	30 38.4	45 26.40	-16.62	+0 12.93	+10.61	-3.16	-26.80	1 31 23.10	51 39 6.2
1 31 56.2	9.0	32 46.36	32 29.7	7 28.20	-13.99	+0 12.93	+ 9.98	-3.18	-26.70	1 33 11.03	51 17 6.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
1 34 44.7	8.3	35 34.30	34 58.9	25 19.35	-30.48	+0 12.91	+ 8.44	-3.17	-26.30	1 35 58.92	49 58 57.1
1 36 34.0	10.0	37 25.35	37 16.6	27 1.25	- 7.26	+0 12.94	+10.89	-3.26	-26.60	1 37 50.15	51 57 40.3
1 38 21.2	8.4	39 11.44	38 54.7	17 3.10	-14.34	+0 12.91	+ 8.64	-3.22	-26.20	1 39 36.11	50 7 29.3
1 41 12.9	9.3	42 3.78	41 35.2	3 46.30	-23.93	+0 12.93	+ 9.68	-3.30	-26.20	1 42 28.59	51 20 37.1
1 46 5.2	8.4	46 57.06	46 27.9	38 54.10	-24.20	+0 12.94	+10.26	-3.37	-26.00	1 47 21.98	51 45 29.0
1 48 14.9	...	49 6.52	48 41.6	53 11.60	-21.20	+0 12.92	+ 8.87	-3.35	-25.70	1 49 31.36	50 31 13.1
1 52 30.9	8.5	53 22.96	52 40.7	21 12.85	-34.82	+0 12.94	+10.64	-3.47	-25.70	1 53 47.98	52 2 59.3
1 54 54.5	8.5	55 46.86	55 12.3	18 49.45	-29.10	+0 12.93	+ 9.38	-3.47	-25.40	1 56 11.82	51 5 27.1
1 57 15.6	...	58 7.86	57 32.2	40 29.30	-30.26	+0 12.93	+ 9.31	-3.47	-25.30	1 58 32.84	50 43 45.6
1 59 2.4	9.3	59 55.72	59 27.8	43 12.40	-23.17	+0 12.94	+10.28	-3.54	-25.10	2 0 20.80	51 41 10.5
2 1 0.1	9.0	1 54.18	1 31.8	12 58.60	-18.80	+0 12.93	+ 9.78	-3.54	-25.10	2 2 19.24	51 11 27.8
2 4 26.2	8.9	5 20.68	4 56.2	45 8.80	-20.35	+0 12.93	+10.61	-3.60	-24.90	2 5 45.82	51 39 16.5
2 6 55.2	9.0	7 48.58	7 26.0	21 50.90	-19.03	+0 12.93	+ 9.74	-3.60	-24.60	2 8 13.71	51 2 34.7
2 9 3.6	8.7	9 56.42	9 39.5	5 53.75	-14.45	+0 12.91	+ 8.97	-3.60	-24.40	2 10 21.49	50 18 35.5
2 13 16.9	8.4	14 11.30	13 42.8	26 6.95	-23.51	+0 12.94	+ 9.65	-3.68	-24.20	2 14 36.64	51 58 13.3
2 16 13.4	9.4	17 7.20	16 45.9	28 12.65	-17.98	+0 12.93	+ 9.49	-3.71	-24.10	2 17 32.42	50 56 12.5
2 18 10.6	6.5	19 4.16	18 39.5	23 47.60	-21.25	+0 12.91	+ 8.17	-3.70	-23.80	2 19 29.30	50 0 32.8
2 20 32.2	8.3	21 28.56	21 9.6	49 3.20	-16.15	+0 12.92	+ 8.95	-3.75	-23.70	2 21 53.79	50 35 22.8
2 23 24.3	8.0	24 20.08	24 1.1	39 8.50	-15.75	+0 12.94	+10.38	-3.83	-23.70	2 24 45.48	51 45 18.7
2 26 2.4	9.2	26 59.22	26 33.9	39 40.90	-20.98	+0 12.94	+10.26	-3.86	-23.50	2 27 24.65	51 44 40.6
2 28 5.0	9.5	29 0.64	28 43.7	15 38.75	-14.20	+0 12.93	+10.05	-3.86	-23.20	2 29 26.02	51 8 49.2
2 30 29.0	8.5	31 26.38	30 58.1	19 12.15	-23.80	+0 12.93	+ 9.48	-3.88	-23.00	2 31 51.79	51 5 5.3
2 30 38.5	8.5	31 34.84	31 1.2	19 12.15	-28.26	+0 12.93	+ 9.38	-3.88	-23.00	2 32 0.25	51 5 0.7
2 32 47.2	8.4	33 44.14	33 22.6	28 41.00	-18.53	+0 12.91	+ 8.34	-3.85	-22.70	2 34 9.45	49 55 40.4
2 35 0.5	8.2	35 57.24	35 25.8	12 28.20	-26.92	+0 12.91	+ 8.53	-3.89	-22.60	2 36 22.59	50 11 44.6
2 38 3.1	9.3	38 59.80	38 34.3	52 41.60	-21.71	+0 12.92	+ 8.98	-3.94	-22.40	2 39 25.23	50 31 36.3
2 40 23.0	9.2	41 21.36	41 2.7	5 36.85	-15.65	+0 12.93	+10.22	-4.00	-22.30	2 41 46.91	51 18 48.0
2 43 13.9	8.0	44 11.26	43 48.7	53 20.85	-19.24	+0 12.92	+ 8.93	-3.99	-22.00	2 44 36.75	50 30 58.8
2 45 45.2	8.4	46 43.38	46 23.1	12 35.35	-17.04	+0 12.93	+ 9.89	-4.06	-21.90	2 47 8.96	51 11 46.9
2 47 58.5	9.3	48 56.92	48 31.6	56 39.40	-21.57	+0 12.92	+ 8.92	-4.03	-21.50	2 49 22.46	50 27 37.2
2 53 44.5	8.4	54 43.28	54 15.6	56 13.45	-23.60	+0 12.92	+ 9.02	-4.09	-21.10	2 55 8.88	50 28 0.3
2 55 59.0	9.0	56 54.22	56 30.3	47 15.00	-20.31	+0 12.92	+ 9.24	-4.12	-21.00	2 57 19.86	50 37 1.8
2 57 41.2	6.5	58 40.18	58 18.9	40 33.40	-17.67	+0 12.94	+10.74	-4.20	-21.00	2 59 5.98	51 43 47.2
3 0 19.8	8.6	1 19.46	0 49.4	24 31.80	-25.37	+0 12.93	+ 9.36	-4.19	-20.60	3 1 45.19	50 59 39.4
3 2 9.2	9.3	3 7.76	2 49.4	3 0.60	-15.38	+0 12.93	+10.06	-4.23	-20.50	3 3 33.55	51 21 20.9
ZONE 147, DECEMBER 27, 1871.											
1 31 56.2	9.0	32 40.14	32 59.9	7 58.70	+16.59	+0 19.09	+ 9.71	-3.04	-27.20	1 33 11.11	51 17 5.6
1 34 44.7	8.2	35 27.98	35 4.0	25 27.55	-20.67	+0 19.08	+ 8.46	-3.04	-26.80	1 35 58.90	49 58 58.2
1 38 21.2	8.5	39 5.14	38 46.9	17 0.00	-15.62	+0 19.08	+ 8.48	-3.09	-26.70	1 39 36.11	50 7 30.4
1 41 12.9	9.2	41 57.48	41 24.5	3 41.95	-27.61	+0 19.10	+ 9.54	-3.16	-26.80	1 42 28.60	51 20 37.0
1 42 57.9	6.4	43 41.78	43 14.9	13 57.07	-23.12	+0 19.08	+ 8.23	-3.14	-26.50	1 44 12.81	50 10 25.2
1 46 5.2	9.2	46 50.76	46 47.7	39 14.85	- 2.57	+0 19.12	+10.33	-3.24	-26.50	1 47 21.99	51 45 29.5
1 48 14.9	8.9	49 0.20	48 28.5	53 5.70	-26.98	+0 19.10	+ 8.62	-3.23	-26.20	1 49 31.34	50 31 12.5
1 51 31.7	8.9	51 2.86	50 34.9	43 31.55	-23.76	+0 19.12	+ 8.93	-3.26	-26.20	1 51 34.07	50 40 49.6
1 52 30.9	8.4	53 16.68	52 53.5	21 27.15	-19.10	+0 19.12	+10.81	-3.34	-26.40	1 53 48.01	52 3 0.2
1 54 54.5	8.5	55 40.60	55 13.4	18 55.10	-22.87	+0 19.10	+ 9.35	-3.34	-26.10	1 56 11.86	51 5 26.9
1 57 15.6	8.4	58 1.48	57 51.7	40 51.25	- 8.31	+0 19.10	+ 9.42	-3.35	-25.90	1 58 32.75	50 43 45.2
1 59 2.4	9.3	59 49.40	59 36.9	43 24.20	-10.38	+0 19.12	+10.30	-3.41	-25.80	2 0 20.79	51 41 10.9
2 1 0.1	8.9	1 47.84	1 27.7	12 58.55	-16.87	+0 19.10	+ 9.62	-3.42	-25.80	2 2 19.19	51 11 29.0
2 4 26.2	8.8	5 14.38	4 49.2	45 7.05	-20.93	+0 19.11	+10.46	-3.47	-25.70	2 5 45.83	51 39 16.8
2 6 55.2	9.1	7 42.32	7 14.7	21 44.75	-23.24	+0 19.10	+ 9.50	-3.48	-25.40	2 8 13.74	51 2 35.6
2 9 3.6	8.8	9 50.32	9 28.0	5 50.10	-19.07	+0 19.09	+ 8.78	-3.49	-25.10	2 10 21.68	50 18 33.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
2 10 49.2	8.9	11 36.56	11 11.6	25 16.15	-21.08	+0 19.12	+ 9.62	-3.53	-25.20	2 12 8.03	50 59 6.0
2 13 16.9	8.5	14 5.08	13 39.1	26 8.30	-21.45	+0 19.12	+ 9.51	-3.56	-25.00	2 14 36.72	51 58 13.0
2 16 13.4	9.0	17 0.88	16 54.4	28 21.60	- 5.49	+0 19.11	+ 9.42	-3.60	-24.80	2 17 32.39	50 56 15.3
2 18 10.6	6.8	18 57.88	18 31.6	23 44.90	-22.63	+0 19.10	+ 8.11	-3.59	-24.50	2 19 29.32	50 0 33.4
2 20 32.2	8.5	21 22.38	20 50.6	48 50.10	-27.03	+0 19.11	+ 8.64	-3.64	-24.40	2 21 53.91	50 35 24.0
2 23 24.3	7.0	24 13.88	23 45.8	38 59.60	-23.29	+0 19.13	+10.16	-3.72	-24.50	2 24 45.58	51 45 19.1
2 26 2.4	9.4	26 53.00	26 29.3	39 41.65	-19.65	+0 19.13	+10.15	-3.75	-24.30	2 27 24.73	51 44 40.3
2 28 5.0	9.7	28 54.46	29 5.5	16 3.55	+ 9.24	+0 19.11	+ 9.99	-3.75	-24.00	2 29 26.13	51 8 47.0
2 30 29.0	8.6	31 20.12	30 56.8	19 15.70	-19.59	+0 19.11	+ 9.38	-3.78	-23.90	2 31 51.81	51 5 5.0
2 30 38.5	8.7	31 28.52	31 0.3	19 15.70	-23.72	+0 19.11	+ 9.31	-3.78	-23.90	2 32 0.21	51 5 0.8
2 32 47.2	8.5	33 38.02	33 13.8	28 37.30	-20.86	+0 19.10	+ 8.16	-3.75	-23.50	2 34 9.62	49 55 40.8
2 35 0.5	8.3	35 51.02	35 29.4	12 34.85	-18.52	+0 19.10	+ 8.48	-3.79	-23.40	2 36 22.66	50 11 45.5
2 38 3.1	9.4	38 53.60	38 28.5	52 40.75	-21.37	+0 19.11	+ 8.80	-3.84	-23.20	2 39 25.32	50 31 36.6
2 40 23.0	9.3	41 15.08	40 44.8	5 23.80	-25.36	+0 19.11	+ 9.92	-3.91	-23.20	2 41 46.90	51 18 50.1
2 43 8.6	9.4	44 0.12	43 50.6	53 8.60	- 8.09	+0 19.11	+ 8.89	-3.90	-22.80	2 44 31.89	50 31 21.4
2 43 13.9	8.3	44 4.92	43 32.0	53 8.60	-28.01	+0 19.11	+ 8.62	-3.90	-22.80	2 44 36.69	50 31 1.2
2 45 45.2	8.5	46 37.20	46 11.2	12 27.45	-21.82	+0 19.11	+ 9.66	-3.96	-22.80	2 47 9.06	51 11 48.9
2 47 58.5	9.7	48 50.84	48 33.6	56 45.48	-14.67	+0 19.11	+ 8.99	-3.95	-22.50	2 49 22.65	50 27 37.1
2 53 44.5	8.5	54 36.96	54 10.1	56 13.00	-22.92	+0 19.11	+ 8.83	-4.01	-22.10	2 55 8.83	50 28 0.3
2 57 23.7	7.3	58 16.04	58 9.0	42 32.30	- 5.81	+0 19.14	+10.46	-4.12	-22.00	2 58 48.11	51 41 58.8
3 0 19.8	8.8	1 13.18	0 56.3	24 41.15	-14.24	+0 19.12	+ 9.31	-4.12	-21.60	3 1 45.17	50 59 40.1
3 2 9.2	8.9	3 1.42	2 42.3	2 59.05	-15.97	+0 19.13	+ 9.85	-4.15	-21.50	3 3 33.49	51 21 20.7
ZONE 148, JANUARY 2, 1872.											
1 43 51.6	9.6	44 31.46	44 25.2	27 39.85	- 5.20	+0 24.92	+10.88	+0.74	- 9.10	1 45 8.60	51 57 2.6
1 45 47.0	8.6	46 26.02	46 3.5	46 43.30	-18.70	+0 24.91	+10.43	+0.73	- 9.00	1 47 3.16	51 37 45.1
1 47 29.1	8.0	48 9.04	47 51.4	31 58.45	-14.55	+0 24.92	+10.77	+0.72	- 9.10	1 48 46.23	51 52 34.1
1 51 10.6	...	51 50.44	51 49.7	25 18.00	- 0.58	+0 24.92	+11.12	+0.69	- 9.10	1 52 27.68	51 59 28.4
1 54 5.9	9.4	54 47.04	54 22.0	17 28.00	-21.02	+0 24.90	+ 9.72	+0.67	- 8.90	1 55 24.22	51 6 56.4
1 56 58.3	8.7	57 37.70	57 20.1	34 25.55	-14.57	+0 24.92	+10.49	+0.65	- 9.10	1 58 15.00	51 50 5.5
1 59 2.4	9.2	59 43.36	59 25.5	43 20.45	-14.86	+0 24.92	+10.42	+0.63	- 9.00	2 0 20.67	51 41 10.1
2 1 39.2	...	2 21.38	1 52.5	52 26.80	-24.07	+0 24.91	+10.15	+0.61	- 9.00	2 2 58.70	51 31 53.9
2 4 48.4	8.8	5 30.36	5 5.3	40 32.80	-20.82	+0 24.92	+10.65	+0.59	- 9.00	2 6 7.74	51 43 51.3
2 6 41.8	8.4	7 21.64	6 59.3	25 52.05	-18.39	+0 24.92	+10.94	+0.58	- 9.10	2 7 59.07	51 58 34.4
2 8 54.0	9.3	9 36.60	9 11.8	45 56.50	-20.61	+0 24.91	+10.51	+0.56	- 9.00	2 10 14.01	51 38 27.0
2 11 24.7	8.7	12 7.50	11 45.2	32 45.00	-18.44	+0 24.92	+10.64	+0.54	- 9.00	2 12 44.97	51 51 40.5
2 13 35.3	6.6	14 16.96	13 49.9	53 37.15	-22.58	+0 24.91	+10.06	+0.52	- 8.90	2 14 54.40	51 30 43.4
2 15 21.8	9.0	16 3.46	15 44.0	35 23.50	-16.06	+0 24.92	+10.82	+0.51	- 9.00	2 16 40.97	51 49 4.0
2 15 21.8	9.0	16 5.14	15 54.6	35 23.50	- 8.69	+0 24.92	+10.89	+0.51	- 9.00	2 16 42.65	51 49 11.4
2 17 56.7	9.5	18 39.56	18 18.1	6 0.10	-18.00	+0 24.90	+10.13	+0.50	- 8.90	2 19 17.03	51 18 24.4
2 21 24.7	9.2	22 8.66	21 59.1	34 50.90	- 7.94	+0 24.92	+10.56	+0.47	- 8.90	2 22 46.24	51 49 43.6
2 23 24.3	6.9	24 7.92	23 54.8	39 11.60	-10.86	+0 24.92	+10.47	+0.46	- 8.90	2 24 45.52	51 45 19.6
2 26 12.3	7.9	26 55.42	26 32.1	28 4.10	-19.24	+0 24.92	+10.70	+0.44	- 8.90	2 27 33.07	51 56 18.5
2 28 32.7	9.1	29 17.36	29 1.1	52 25.85	-13.58	+0 24.91	+10.22	+0.42	- 8.80	2 29 54.97	51 32 1.7
2 32 15.8	8.9	33 0.38	32 44.3	30 37.40	-13.30	+0 24.92	+10.94	+0.39	- 8.90	2 33 38.08	51 53 50.4
2 34 36.9	8.6	35 21.46	34 58.4	37 52.80	-19.14	+0 24.92	+10.53	+0.38	- 8.80	2 35 59.18	51 46 28.5
2 36 45.8	9.2	37 31.82	37 2.3	43 35.75	-24.49	+0 24.92	+10.22	+0.36	- 8.80	2 38 9.54	51 40 39.5
2 39 17.8	9.0	40 2.88	39 46.2	56 33.75	-13.93	+0 24.91	+10.31	+0.35	- 8.70	2 40 40.60	51 27 51.8
2 57 23.7	8.5	58 10.08	57 42.3	42 15.35	-23.07	+0 24.91	+10.45	+0.22	- 8.50	2 58 48.00	51 41 58.2
3 0 8.4	9.3	0 55.34	0 33.6	57 6.80	-18.50	+0 24.89	+ 8.96	+0.22	- 8.20	3 1 33.12	50 27 9.7
3 2 24.5	8.5	3 12.18	2 46.9	51 13.05	-21.06	+0 24.91	+10.35	+0.19	- 8.30	3 3 50.12	51 33 1.7
3 4 22.4	8.7	5 9.92	4 43.4	16 59.50	-22.27	+0 24.89	+ 9.77	+0.19	- 8.20	3 5 47.82	51 7 13.2
3 7 18.2	8.3	8 6.32	7 41.9	57 58.90	-20.36	+0 24.90	+10.10	+0.17	- 8.30	3 8 44.29	51 26 15.4

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	° "	"	m s	"	s	"	h m s	° ' "
3 9 39.2	8.6	10 29.04	10 4.3	47 33.05	-20.54	+0 24.90	+10.32	+0.15	- 8.30	3 11 7.05	51 36 40.8
3 11 56.6	9.0	12 44.80	12 20.5	11 38.75	-20.38	+0 24.89	+ 9.97	+0.14	- 8.10	3 13 22.77	51 12 34.7
3 21 47.3	...	22 36.92	22 28.5	46 10.30	- 6.98	+0 24.90	+10.70	+0.07	- 8.00	3 23 15.03	51 38 15.4
3 29 47.8	8.9	30 40.30	30 12.8	48 5.95	-22.87	+0 24.90	+10.24	+0.02	- 7.90	3 31 18.47	51 36 1.8
3 35 8.6	9.2	35 59.56	35 52.4	2 24.70	- 5.93	+0 24.90	+10.20	-0.01	- 7.70	3 36 37.73	51 21 59.0
3 37 32.4	8.6	38 23.88	37 56.4	45 4.20	-22.84	+0 24.90	+10.59	-0.03	- 7.70	3 39 2.10	51 39 2.5
ZONE 149, JANUARY 8, 1872.											
1 41 43.5	6.0	42 15.74	41 46.6	5 25.95	-24.36	+0 29.46	+10.04	+0.89	- 9.20	1 42 57.48	51 18 57.7
1 43 51.6	10.0	44 26.74	44 13.7	27 34.10	-10.73	+0 29.48	+10.70	+0.88	- 9.30	1 45 8.58	51 57 3.5
1 45 47.0	8.6	46 21.42	46 0.7	46 46.45	-17.21	+0 29.48	+10.31	+0.87	- 9.30	1 47 3.27	51 37 44.1
1 47 29.1	8.0	48 4.32	47 46.5	31 58.20	-14.71	+0 29.49	+10.64	+0.86	- 9.40	1 48 46.22	51 52 34.8
1 51 10.6	8.6	51 45.64	51 20.5	24 58.05	-20.70	+0 29.49	+10.88	+0.82	- 9.40	1 52 27.58	51 59 28.8
1 54 5.9	9.5	54 42.40	54 14.4	17 26.90	-23.54	+0 29.47	+ 9.58	+0.80	- 9.20	1 55 24.28	51 6 55.6
1 56 58.3	8.5	57 33.12	57 1.8	34 13.95	-25.90	+0 29.50	+10.21	+0.78	- 9.40	1 58 15.13	51 50 6.3
1 59 2.4	9.4	59 38.70	59 8.6	43 10.20	-24.99	+0 29.50	+10.15	+0.76	- 9.30	2 0 20.72	51 41 10.7
2 1 39.2	8.8	2 16.64	1 48.7	52 29.20	-23.24	+0 29.49	+10.04	+0.74	- 9.30	2 2 58.67	51 31 53.0
2 4 48.4	8.7	5 25.60	4 58.0	40 31.05	-22.89	+0 29.51	+10.51	+0.72	- 9.30	2 6 7.70	51 43 51.6
2 6 41.8	8.4	7 16.98	6 55.6	25 53.45	-17.65	+0 29.51	+10.83	+0.71	- 9.40	2 7 59.13	51 58 34.3
2 8 54.0	9.1	9 31.72	9 20.0	46 8.50	- 9.72	+0 29.50	+10.61	+0.69	- 9.30	2 10 13.85	51 38 26.8
2 11 24.7	8.6	12 2.68	11 45.9	32 50.80	-13.89	+0 29.51	+10.67	+0.67	- 9.40	2 12 44.87	51 51 39.9
2 13 35.3	6.8	14 12.14	13 53.8	53 45.95	-15.25	+0 29.50	+10.01	+0.65	- 9.30	2 14 54.30	51 30 42.5
2 15 21.8	9.3	15 58.80	15 54.7	35 36.50	- 3.39	+0 29.52	+10.79	+0.64	- 9.40	2 16 41.04	51 49 4.3
2 15 21.8	9.0	16 0.40	16 4.6	35 36.50	+ 3.48	+0 29.52	+10.79	+0.64	- 9.40	2 16 42.64	51 49 11.1
2 17 56.7	9.3	18 34.90	18 22.5	6 9.60	-10.62	+0 29.50	+10.19	+0.62	- 9.30	2 19 17.09	51 18 23.0
2 21 24.7	9.0	22 3.96	21 44.7	34 43.95	-15.97	+0 29.52	+10.31	+0.60	- 9.30	2 22 46.27	51 49 42.9
2 23 24.3	7.2	24 3.08	23 38.5	39 2.90	-20.39	+0 29.52	+10.21	+0.58	- 9.30	2 24 45.40	51 45 19.2
2 26 12.3	8.2	26 50.70	26 28.9	28 5.05	-17.99	+0 29.52	+10.56	+0.56	- 9.30	2 27 33.07	51 56 19.3
2 28 32.7	8.9	29 12.54	28 46.7	52 18.40	-21.50	+0 29.52	+10.09	+0.54	- 9.20	2 29 54.88	51 32 1.7
2 32 15.8	8.7	32 55.72	32 30.3	30 30.35	-20.99	+0 29.53	+10.73	+0.52	- 9.30	2 33 38.16	51 53 50.2
2 34 36.9	8.5	35 16.68	34 57.1	37 55.60	-16.24	+0 29.53	+10.42	+0.50	- 9.30	2 35 59.13	51 46 29.0
2 36 45.8	8.9	37 26.98	37 2.8	43 41.00	-20.09	+0 29.53	+10.14	+0.48	- 9.30	2 38 9.43	51 40 39.1
2 39 17.8	9.0	39 58.14	39 44.7	56 38.70	-11.18	+0 29.53	+10.21	+0.46	- 9.20	2 40 40.59	51 27 50.1
3 0 8.4	9.1	0 50.60	0 39.9	57 15.40	- 9.12	+0 29.53	+ 8.99	+0.32	- 8.80	3 1 33.12	50 27 10.9
3 2 24.5	8.1	3 7.34	2 30.7	51 4.40	-30.47	+0 29.55	+10.05	+0.30	- 9.00	3 3 50.03	51 33 1.0
3 4 22.4	8.6	5 5.22	4 39.8	17 0.95	-21.35	+0 29.54	+ 9.68	+0.28	- 8.90	3 5 47.86	51 7 12.9
3 7 18.2	8.4	8 1.52	7 35.2	57 57.00	-21.45	+0 29.56	+ 9.93	+0.27	- 8.90	3 8 44.25	51 26 16.5
3 9 39.2	8.5	10 24.32	9 57.7	47 32.60	-22.12	+0 29.56	+10.17	+0.24	- 8.90	3 11 7.08	51 36 40.0
3 11 56.6	8.6	12 39.92	12 22.0	11 44.80	-15.02	+0 29.55	+ 9.90	+0.22	- 8.80	3 13 22.63	51 12 34.3
3 15 3.2	9.5	15 48.00	15 15.6	49 32.00	-26.96	+0 29.56	+ 9.89	+0.21	- 8.90	3 16 30.81	51 34 34.4
3 16 49.4	8.8	17 34.06	17 10.5	40 17.00	-19.57	+0 29.56	+10.59	+0.19	- 8.90	3 18 16.90	51 43 57.1
3 21 47.3	8.5	22 32.22	22 5.7	45 56.05	-22.02	+0 29.57	+10.42	+0.16	- 8.80	3 23 15.09	51 38 14.6
3 29 47.8	9.0	30 35.50	30 20.2	48 17.50	-12.72	+0 29.57	+10.21	+0.10	- 8.60	3 31 18.42	51 36 0.7
3 35 8.6	9.2	35 54.86	35 22.9	2 3.65	-26.75	+0 29.58	+ 9.86	+0.07	- 8.50	3 36 37.79	51 21 59.2
3 37 32.4	8.5	38 19.06	37 45.4	44 59.40	-27.99	+0 29.58	+10.38	+0.05	- 8.50	3 39 2.04	51 39 2.2
ZONE 150, JANUARY 10, 1872.											
3 5 4.0	8.4	5 47.46	5 37.5	7 28.55	- 8.19	+0 31.19	+10.78	+0.31	- 9.30	3 6 31.94	52 16 57.8
3 11 10.0	8.5	11 53.58	11 41.9	22 8.80	- 9.42	+0 31.21	+11.70	+0.26	- 9.40	3 12 38.23	53 2 15.9
3 14 1.4	8.8	14 43.68	14 24.3	40 32.95	-15.73	+0 31.21	+11.46	+0.24	- 9.30	3 15 28.31	52 43 44.7

R. A. 1855.0. According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	° "	"	m s	"	s	"	h m s	° ' "
3 15 55.5	8.5	16 40.30	16 13.9	55 46.75	-21.53	+0 31.20	+11.02	+0.23	- 9.30	3 17 24.91	52 28 24.3
3 18 39.0	8.6	19 22.12	18 50.1	29 2.65	-25.83	+0 31.21	+11.13	+0.21	- 9.30	3 20 6.82	52 55 3.7
3 22 36.7	8.7	23 20.62	23 1.8	52 39.40	-15.32	+0 31.20	+10.98	+0.18	- 9.20	3 24 5.28	52 31 36.6
3 26 8.5	9.0	26 51.40	26 27.7	55 56.00	-19.33	+0 31.20	+11.04	+0.15	- 9.10	3 27 36.07	52 28 15.4
3 28 16.5	8.7	29 1.82	28 23.1	59 36.15	-31.61	+0 31.21	+10.36	+0.14	- 9.10	3 29 46.52	52 24 21.9
3 30 55.5	9.2	31 40.50	31 58.0	31 28.75	+14.14	+0 31.21	+11.55	+0.11	- 9.10	3 32 25.28	52 53 15.6
3 33 9.7	9.1	33 55.38	33 41.3	20 9.50	-11.60	+0 31.21	+10.78	+0.11	- 8.90	3 34 40.06	52 4 8.1
3 35 3.6	8.8	35 49.18	35 40.5	53 6.85	- 7.77	+0 31.21	+11.01	+0.09	- 9.00	3 36 33.94	52 31 14.3
3 36 58.4	9.4	37 44.72	37 35.0	19 9.20	- 7.98	+0 31.21	+10.41	+0.08	- 8.90	3 38 29.42	52 5 10.8
3 39 31.8	6.3	40 16.26	39 45.7	18 12.00	-25.16	+0 31.21	+10.30	+0.06	- 8.80	3 41 0.98	52 5 50.3
3 42 38.8	8.9	43 24.82	42 51.3	12 35.05	-27.50	+0 31.21	+10.43	+0.04	- 8.70	3 44 9.57	52 11 24.6
3 44 32.7	9.0	45 18.52	44 55.2	58 57.05	-19.02	+0 31.21	+10.69	+0.02	- 8.80	3 46 3.31	52 25 10.7
3 47 2.6	8.1	47 47.88	47 13.1	38 10.05	-28.83	+0 31.22	+ 9.87	+0.01	- 8.60	3 48 32.60	51 45 46.7
3 49 21.4	9.2	50 11.98	49 46.4	41 6.40	-20.76	+0 31.23	+11.30	+0.00	- 8.80	3 50 56.88	52 42 59.1
3 51 10.3	8.8	51 56.86	51 36.4	52 47.05	-16.70	+0 31.22	+10.96	-0.02	- 8.70	3 52 41.72	52 31 21.9
3 53 12.9	...	54 0.14	53 30.5	59 4.65	-24.17	+0 31.22	+10.58	-0.03	- 8.60	3 54 44.99	52 24 56.1
3 55 9.1	9.2	55 57.14	55 45.0	39 29.70	- 9.81	+0 31.23	+11.15	-0.05	- 8.60	3 56 42.06	52 44 45.5
3 57 23.2	9.2	58 10.88	58 5.8	21 26.80	- 4.11	+0 31.23	+11.82	-0.07	- 8.70	3 58 55.86	53 2 54.2
3 58 59.2	8.4	59 45.88	59 34.7	43 39.05	- 9.09	+0 31.23	+11.18	-0.08	- 8.60	4 0 30.81	52 40 36.1
4 1 57.4	9.0	2 44.60	2 13.7	46 55.85	-25.11	+0 31.22	+11.02	-0.09	- 8.50	4 3 29.53	52 37 2.5
4 5 21.3	9.5	6 9.00	6 2.9	44 54.50	- 4.95	+0 31.22	+11.00	-0.11	- 8.40	4 6 53.95	52 39 23.3
4 7 21.5	8.1	8 8.30	7 43.8	44 14.80	-19.89	+0 31.23	+10.98	-0.13	- 8.40	4 8 53.27	52 39 47.6
4 9 27.5	8.1	10 14.68	9 42.4	21 21.25	-26.00	+0 31.24	+11.56	-0.15	- 8.40	4 10 59.72	53 2 35.1
4 11 1.9	8.6	11 49.74	11 26.3	21 49.70	-18.84	+0 31.24	+11.65	-0.16	- 8.30	4 12 34.79	53 2 13.7
4 13 7.2	6.0	13 53.10	13 23.7	45 25.60	-24.43	+0 31.22	+10.12	-0.15	- 8.00	4 14 37.93	51 38 30.5
4 15 12.0	7.5	15 59.12	15 36.2	10 55.65	-18.78	+0 31.23	+10.79	-0.17	- 8.10	4 16 44.05	52 13 6.1
ZONE 151, JANUARY 12, 1872.											
3 5 4.0	8.1	6 15.32	6 1.3	7 21.20	-11.47	+0 3.20	+10.59	+0.35	- 9.50	3 6 31.85	52 16 59.1
3 11 10.0	8.5	12 21.52	12 9.6	22 4.45	- 9.58	+0 3.23	+11.50	+0.30	- 9.60	3 12 38.23	53 2 17.3
3 14 1.4	8.9	15 11.74	14 55.7	40 32.85	-12.97	+0 3.23	+11.29	+0.28	- 9.40	3 15 28.43	52 43 45.0
3 15 55.5	8.0	17 8.36	17 23.6	56 17.60	+12.40	+0 3.22	+10.90	+0.27	- 9.50	3 17 25.03	52 28 24.7
3 18 39.0	8.8	19 50.18	19 25.4	29 5.15	-20.02	+0 3.23	+11.03	+0.24	- 9.50	3 20 6.93	52 55 4.3
3 22 36.7	8.8	23 48.58	23 28.9	52 36.15	-16.05	+0 3.22	+10.78	+0.22	- 9.40	3 24 5.30	52 31 36.4
3 28 16.5	8.2	29 29.76	29 6.8	59 45.55	-18.79	+0 3.23	+10.41	+0.17	- 9.30	3 29 46.51	52 24 22.8
3 30 55.5	9.5	32 8.36	31 53.5	30 58.10	-12.04	+0 3.24	+11.43	+0.15	- 9.40	3 32 25.20	52 53 17.3
3 33 9.7	9.0	34 23.42	34 3.4	20 1.45	-16.46	+0 3.22	+10.56	+0.14	- 9.20	3 34 40.14	52 4 8.4
3 35 3.6	9.0	36 17.04	36 26.0	53 16.80	+ 7.33	+0 3.23	+10.80	+0.13	- 9.30	3 36 33.86	52 31 16.6
3 36 58.4	9.2	38 12.64	38 1.0	19 6.35	- 9.54	+0 3.22	+10.23	+0.12	- 9.10	3 38 29.39	52 5 9.4
3 39 31.8	7.0	40 44.30	40 19.7	18 13.65	-20.23	+0 3.22	+10.20	+0.10	- 9.00	3 41 1.07	52 5 50.9
3 42 38.8	8.5	43 52.88	43 41.8	12 50.75	- 9.11	+0 3.23	+10.49	+0.08	- 9.00	3 44 9.69	52 11 24.7
*3 47 2.6	9.5	48 15.90	47 59.1	38 19.85	-13.92	+0 3.23	+ 9.93	+0.05	- 8.90	3 48 32.67	51 45 49.2
ZONE 152, JANUARY 24, 1872.											
3 44 32.7	9.0	45 43.50	45 50.8	59 14.75	+ 5.96	+0 6.00	+10.90	+0.29	-10.20	3 46 3.35	52 25 11.9
3 53 12.9	9.0	54 25.04	54 6.7	59 7.40	-14.94	+0 6.00	+10.84	+0.22	-10.10	3 54 44.92	52 24 56.5
3 55 9.1	9.0	56 22.20	56 12.7	39 25.70	- 7.70	+0 6.01	+11.28	+0.20	-10.20	3 56 42.15	52 44 45.3
3 57 23.2	...	58 35.80	58 18.5	21 11.40	-13.93	+0 6.01	+11.89	+0.18	-10.30	3 58 55.81	53 2 53.4
4 1 57.4	8.8	3 9.58	2 39.2	46 50.10	-24.71	+0 6.00	+11.15	+0.15	-10.20	4 3 29.53	52 37 2.3
4 5 21.3	9.2	6 33.96	6 5.6	44 30.15	-23.07	+0 6.01	+10.95	+0.12	-10.20	4 6 53.93	52 39 22.9

* [9.5] 3 48 [32.67] 51 45 [49.2]

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red to Horiz. Wire.	Sum of Reductions.			Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.		R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"		s "		h m s	° ' "
4 7 21.5	7.9	8 33.26	8 6.3	44 5.60	-21.92	+0 6.01	+11.06	+0.10	-10.20		4 8 53.24	52 39 48.2
4 9 27.5	8.3	10 39.72	10 15.3	21 23.15	-19.64	+0 6.02	+11.80	+0.09	-10.30		4 10 59.78	53 2 33.0
4 11 1.9	8.6	12 14.78	11 54.5	21 45.10	-16.34	+0 6.02	+11.81	+0.07	-10.30		4 12 34.84	53 2 14.0
4 13 7.2	7.0	14 18.14	13 44.5	45 15.10	-27.92	+0 5.99	+10.13	+0.07	-9.90		4 14 37.96	51 38 30.7
4 15 12.0	8.2	16 24.14	15 53.2	10 43.40	-25.34	+0 6.00	+10.80	+0.05	-10.10		4 16 44.06	52 13 4.9
4 25 43.7	8.5	26 55.68	26 21.1	22 5.85	-28.51	+0 6.00	+10.38	-0.03	-9.80		4 27 15.59	52 1 36.7
4 27 28.2	8.7	28 40.26	28 21.9	38 25.60	-15.25	+0 6.00	+10.24	-0.04	-9.60		4 29 0.13	51 45 29.9
4 31 31.4	8.5	32 45.30	32 14.4	29 57.10	-24.96	+0 6.02	+11.62	-0.08	-9.70		4 33 5.38	52 53 48.9
4 33 35.4	7.4	34 48.74	34 39.4	17 57.30	-7.65	+0 6.00	+10.67	-0.09	-9.50		4 35 8.67	52 6 4.8
4 35 36.4	8.4	36 50.34	36 38.6	36 23.45	-9.69	+0 6.00	+10.48	-0.10	-9.40		4 37 10.22	51 47 36.0
4 41 10.0	8.2	42 19.54	41 58.2	13 9.60	-17.87	+0 5.98	+9.50	-0.13	-9.20		4 42 39.31	51 10 39.6
4 41 10.0	8.7	42 19.90	42 41.4	13 9.60	+18.04	+0 5.98	+9.52	-0.13	-9.20		4 42 39.67	51 11 15.5
4 44 54.3	8.5	46 8.26	45 31.0	29 58.70	-30.81	+0 6.00	+10.41	-0.17	-9.20		4 46 28.16	51 53 37.5
4 47 51.8	7.7	49 5.40	48 28.6	5 41.25	-30.12	+0 6.00	+10.79	-0.19	-9.00		4 49 25.36	52 17 55.5
4 53 4.1	9.0	54 16.22	54 9.6	39 45.35	-5.47	+0 6.00	+10.61	-0.22	-9.00		4 54 36.09	51 44 14.4
4 55 6.4	9.6	56 20.92	56 1.2	37 30.60	-16.32	+0 5.99	+10.27	-0.24	-9.00		4 56 40.75	51 46 17.5
4 57 22.0	9.3	58 36.76	58 27.5	33 51.00	-7.69	+0 6.00	+10.30	-0.26	-9.00		4 58 56.64	51 50 5.2
5 2 39.8	7.3	3 53.34	3 33.1	6 48.30	-16.91	+0 6.00	+9.77	-0.29	-8.70		5 4 13.12	51 16 57.2
5 5 0.5	8.7	6 14.72	5 50.2	53 16.95	-20.42	+0 5.99	+9.82	-0.31	-8.70		5 6 34.52	51 30 24.4
5 7 11.5	8.2	8 27.34	7 53.3	42 7.50	-27.59	+0 6.03	+11.20	-0.34	-8.90		5 8 47.38	52 41 27.3
5 12 26.8	8.4	13 42.96	13 50.3	35 25.50	+5.91	+0 6.03	+11.78	-0.38	-8.80		5 14 3.01	52 48 42.2
5 14 34.2	9.1	15 50.48	15 35.4	52 27.40	-12.30	+0 6.02	+11.16	-0.39	-8.70		5 16 10.46	52 31 21.0
5 19 21.8	9.0	20 36.32	20 19.7	11 29.70	-13.92	+0 5.99	+9.74	-0.39	-8.20		5 20 56.05	51 12 14.8
5 21 48.3	7.9	23 2.52	22 25.1	0 58.95	-31.25	+0 6.00	+9.68	-0.41	-8.20		5 23 22.28	51 22 27.6
5 23 3.7	8.2	24 19.60	24 18.6	34 13.95	-0.83	+0 6.01	+10.29	-0.42	-8.30		5 24 39.45	51 49 43.2
5 26 53.9	7.8	28 7.82	27 36.3	1 50.10	-26.33	+0 6.00	+9.70	-0.44	-8.10		5 28 27.57	51 21 40.2
5 29 6.2	7.7	30 21.70	29 59.8	53 51.80	-17.85	+0 6.02	+10.94	-0.48	-8.30		5 30 41.64	52 29 47.5
5 31 23.2	8.8	32 39.50	32 7.3	14 33.00	-26.45	+0 6.01	+10.34	-0.48	-8.10		5 32 59.38	52 8 56.8
ZONE 153, JANUARY 31, 1872.												
4 25 43.7	9.4	26 54.02	26 22.9	22 42.75	+25.12	+0 7.55	+10.58	+0.11	-10.40		4 27 15.62	52 1 37.0
4 27 28.2	9.4	28 38.54	28 23.6	38 37.15	+12.11	+0 7.55	+10.41	+0.10	-10.30		4 29 0.10	51 45 29.1
4 31 31.4	8.7	32 43.58	32 37.4	30 9.50	+4.91	+0 7.57	+12.14	+0.06	-10.40		4 33 5.35	52 53 50.2
4 33 35.4	8.2	34 46.96	34 31.3	17 58.55	+12.48	+0 7.55	+10.82	+0.05	-10.20		4 35 8.58	52 6 7.1
4 35 36.4	9.0	36 48.62	36 42.3	36 19.30	+5.11	+0 7.55	+10.72	+0.03	-10.10		4 37 10.18	51 47 38.5
4 41 10.0	8.7	42 17.56	42 31.6	12 57.85	-11.63	+0 7.52	+9.76	-0.01	-9.90		4 42 39.01	51 10 41.1
4 41 10.0	9.0	42 18.44	41 48.1	12 57.85	+24.92	+0 7.52	+9.59	-0.01	-9.90		4 42 39.87	51 11 17.5
4 44 54.3	8.5	46 6.50	45 48.7	30 27.60	+14.42	+0 7.55	+10.85	-0.04	-10.00		4 46 28.08	51 53 37.4
4 47 51.8	8.6	49 3.64	48 36.8	6 15.30	+21.51	+0 7.55	+11.13	-0.08	-9.80		4 49 25.26	52 17 56.6
4 53 30.2	9.4	54 41.20	54 31.4	40 32.05	+7.97	+0 7.55	+10.71	-0.11	-9.80		4 55 2.73	51 43 24.4
5 2 39.8	8.3	3 51.68	3 25.8	7 8.95	+21.27	+0 7.51	+9.97	-0.17	-9.50		5 4 13.09	51 16 58.1
5 5 0.5	8.9	6 13.06	5 54.0	53 35.85	+15.60	+0 7.52	+10.03	-0.19	-9.60		5 6 34.51	51 30 24.9
5 7 11.5	8.6	8 25.62	8 0.1	42 37.45	+20.29	+0 7.56	+11.51	-0.23	-9.80		5 8 47.30	52 41 28.7
5 12 26.8	8.6	13 41.22	13 24.1	35 14.55	+13.57	+0 7.56	+11.99	-0.27	-9.70		5 14 2.91	52 48 44.1
5 14 34.2	9.5	15 48.68	15 28.1	52 38.25	+16.33	+0 7.55	+11.32	-0.28	-9.60		5 16 10.30	52 31 22.0
5 19 45.8	7.5	20 57.70	21 14.9	12 32.40	-14.14	+0 7.51	+9.81	-0.30	-9.20		5 21 19.04	51 10 54.9
5 21 48.3	8.2	23 0.82	22 44.8	1 25.65	+13.11	+0 7.52	+10.15	-0.32	-9.20		5 23 22.19	51 22 28.8
5 26 53.9	7.9	28 6.08	28 0.0	2 4.35	+4.92	+0 7.52	+10.12	-0.35	-9.10		5 28 27.44	51 21 40.6
5 29 6.2	7.7	30 20.02	30 4.4	54 5.00	+12.46	+0 7.55	+11.19	-0.38	-9.30		5 30 41.59	52 29 47.8

ZONE 154, FEBRUARY 1, 1872.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
4 35 23.4	8.6	36 33.78	36 7.5	19 9.40	+21.69	+0 8.12	+ 9.51	+0.06	-10.10	4 36 55.82	51 5 4.4
4 37 11.1	9.5	38 21.62	38 39.5	3 29.60	-14.68	+0 8.13	+ 9.98	+0.04	-10.10	4 38 43.71	51 20 7.8
4 39 14.5	8.9	40 27.98	40 15.0	22 34.45	+10.26	+0 8.16	+12.14	+0.01	-10.50	4 40 50.38	53 1 29.1
4 41 10.0	8.7	42 16.96	42 40.0	12 50.60	-18.92	+0 8.12	+ 9.68	+0.01	-10.00	4 42 39.00	51 10 41.4
4 41 10.0	9.0	42 17.66	41 57.4	12 50.60	+16.70	+0 8.12	+ 9.86	+0.01	-10.00	4 42 39.70	51 11 17.2
4 44 9.0	9.6	45 20.64	45 26.3	14 45.30	- 4.69	+0 8.12	+10.26	-0.01	- 9.90	4 45 42.69	51 9 0.9
4 46 37.5	9.1	47 48.00	47 28.7	22 46.35	+16.28	+0 8.10	+ 8.50	-0.02	- 9.60	4 48 9.84	50 1 18.7
4 49 6.3	8.8	50 16.28	49 47.4	21 55.15	+24.36	+0 8.10	+ 8.49	-0.04	- 9.60	4 50 38.12	50 2 11.4
.....	9.2	52 32.60	52 35.3	32 1.10	- 2.19	+0 8.15	+10.88	-0.07	- 9.90	4 52 54.79	51 51 46.4
4 54 12.2	9.8	55 24.22	55 5.3	38 43.20	+15.36	+0 8.15	+10.48	-0.10	-10.00	4 55 46.38	51 45 20.6
4 56 26.9	8.4	57 39.96	57 25.1	27 11.40	+12.05	+0 8.15	+10.90	-0.12	-10.00	4 58 2.14	51 56 48.9
4 58 9.4	10.0	59 22.14	59 12.1	50 18.95	+ 7.98	+0 8.16	+11.84	-0.14	-10.10	4 59 44.44	52 33 37.7
5 2 11.6	8.7	3 26.02	2 50.6	32 18.30	+28.06	+0 8.17	+11.75	-0.17	-10.10	5 3 48.37	52 51 57.4
5 5 22.0	9.3	6 34.98	6 10.6	17 34.90	+19.67	+0 8.16	+10.97	-0.19	- 9.80	5 6 57.18	52 6 31.1
5 7 11.5	8.4	8 24.92	8 8.5	42 31.70	+13.05	+0 8.18	+11.77	-0.21	- 9.90	5 8 47.24	52 41 27.9
5 10 29.0	9.3	11 41.94	11 11.9	22 3.70	+24.23	+0 8.16	+10.85	-0.23	- 9.70	5 12 4.11	52 2 5.5
5 12 58.2	7.7	14 9.58	13 31.9	17 43.40	+30.39	+0 8.16	+10.71	-0.25	- 9.70	5 14 31.76	52 6 31.2
5 20 34.6	7.7	21 45.22	21 26.8	15 38.20	+15.15	+0 8.15	+10.08	-0.29	- 9.30	5 22 7.20	51 8 19.0
5 22 17.7	9.2	23 30.44	23 12.7	10 9.80	+14.55	+0 8.16	+10.23	-0.30	- 9.30	5 23 52.45	51 13 46.5
5 24 3.2	8.5	25 16.54	24 53.9	55 21.20	+18.07	+0 8.18	+11.63	-0.33	- 9.50	5 25 38.77	52 28 39.3
5 27 57.5	8.8	29 11.30	28 31.4	44 33.65	+31.76	+0 8.19	+11.12	-0.36	- 9.50	5 29 33.56	52 39 39.0
5 29 39.0	8.3	30 51.58	30 39.5	17 41.20	+ 9.75	+0 8.17	+11.07	-0.37	- 9.30	5 31 13.71	52 6 9.2
5 31 46.7	6.9	33 0.74	32 22.5	58 49.30	+30.57	+0 8.19	+10.97	-0.39	- 9.30	5 33 22.93	52 25 21.5
5 33 54.5	6.8	35 8.22	34 51.9	17 23.90	+13.14	+0 8.19	+11.08	-0.40	- 9.20	5 35 30.35	52 6 28.9
5 36 22.7	8.9	37 36.92	37 9.4	45 10.10	+21.90	+0 8.19	+11.88	-0.43	- 9.30	5 37 59.12	52 38 51.5
5 38 23.0	8.0	39 35.08	39 4.8	4 22.70	+24.85	+0 8.17	+ 9.75	-0.42	- 8.90	5 39 57.04	51 19 39.6
5 40 44.2	8.8	41 57.08	41 34.1	15 24.75	+18.53	+0 8.18	+11.27	-0.45	- 9.00	5 42 19.17	52 8 32.0
5 42 46.7	8.9	43 59.74	43 34.7	10 7.80	+20.10	+0 8.18	+11.39	-0.47	- 9.00	5 44 21.83	52 13 50.1
5 44 44.8	6.8	45 56.32	45 36.8	37 10.50	+15.84	+0 8.18	+10.70	-0.47	- 8.80	5 46 18.32	51 46 42.2
5 46 41.5	...	47 55.38	47 35.4	22 19.20	+16.15	+0 8.18	+10.98	-0.49	- 8.90	5 48 17.42	52 1 33.4

ZONE 155, FEBRUARY 4, 1872.

4 37 10.1	9.2	38 20.28	38 10.9	3 53.25	+ 7.71	+0 9.35	+ 9.61	+0.11	-10.30	4 38 43.66	51 20 5.6
4 39 14.5	9.0	40 26.64	40 3.7	22 39.85	+18.08	+0 9.37	+11.49	+0.08	-10.80	4 40 50.32	53 1 30.3
4 41 10.0	8.8	42 15.80	42 2.3	13 20.10	+11.11	+0 9.34	+ 9.46	+0.08	-10.30	4 42 39.13	51 10 41.1
4 44 9.0	9.5	45 19.40	44 53.6	15 9.60	+21.24	+0 9.34	+ 9.63	+0.05	-10.20	4 45 42.73	51 9 1.2
4 46 37.5	9.0	47 46.72	47 24.6	22 48.40	+18.64	+0 9.33	+ 8.11	+0.04	- 9.90	4 48 9.85	50 1 18.0
4 49 6.3	...	50 15.04	49 49.9	21 50.90	+21.16	+0 9.33	+ 8.20	+0.02	- 9.90	4 50 38.17	50 2 11.5
4 56 26.9	8.5	57 38.68	57 18.1	27 15.05	+16.67	+0 9.38	+10.34	-0.05	-10.30	4 58 2.16	51 56 48.7
5 0 15.9	9.0	1 29.28	0 59.8	29 34.80	+23.89	+0 9.38	+10.00	-0.09	-10.20	5 1 52.74	51 54 35.0
5 2 11.6	9.0	3 24.84	3 5.6	32 5.15	+15.22	+0 9.40	+11.45	-0.11	-10.40	5 3 48.48	52 51 56.7
5 5 22.0	8.8	6 33.58	6 14.9	17 29.00	+15.07	+0 9.39	+10.51	-0.13	-10.20	5 6 57.07	52 6 31.2
5 7 11.5	8.0	8 23.66	8 9.6	42 27.00	+11.22	+0 9.41	+11.26	-0.15	-10.30	5 8 47.27	52 41 29.5
5 10 29.0	9.0	11 40.72	11 19.6	21 55.40	+17.04	+0 9.39	+10.48	-0.17	-10.10	5 12 4.18	52 2 5.5
5 12 58.2	8.2	14 8.36	13 50.8	17 26.20	+14.19	+0 9.39	+10.53	-0.19	-10.00	5 14 31.83	52 6 31.4
5 22 17.7	9.2	23 29.12	23 13.5	10 6.75	+12.82	+0 9.38	+ 9.84	-0.25	- 9.60	5 23 52.40	51 13 46.8
5 24 3.2	...	25 15.20	25 4.0	55 11.95	+ 8.95	+0 9.41	+11.23	-0.28	- 9.90	5 25 38.71	52 28 38.3
5 27 57.5	8.7	29 10.18	28 56.6	44 9.70	+10.83	+0 9.42	+10.99	-0.32	- 9.90	5 29 33.71	52 39 41.2
5 29 39.0	...	30 50.15	31 8.8	17 14.55	-15.07	+0 9.40	+10.54	-0.32	- 9.70	5 31 13.56	52 6 9.8
5 31 46.7	7.0	32 59.52	32 41.8	58 30.75	+14.17	+0 9.41	+10.76	-0.34	- 9.70	5 33 22.98	52 25 22.7

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
5 33 54.5	6.5	35 7.02	34 37.7	17 33.00	+23.62	+0 9.41	+10.38	-0.36	-9.60	5 35 30.41	52 6 28.8
5 36 22.7	9.0	37 35.62	37 20.0	44 58.15	+12.42	+0 9.42	+11.48	-0.38	-9.70	5 37 59.10	52 38 52.8
5 38 23.0	8.0	39 33.74	39 18.0	4 9.50	+12.88	+0 9.40	+9.51	-0.37	-9.30	5 39 56.98	51 19 39.8
5 40 44.2	8.8	41 55.96	41 42.3	15 15.70	+10.30	+0 9.41	+10.86	-0.40	-9.40	5 42 19.33	52 8 31.7
5 42 46.7	8.7	43 58.48	43 43.6	9 58.40	+11.98	+0 9.41	+10.99	-0.42	-9.40	5 44 21.85	52 13 50.3
5 44 44.8	7.0	45 55.14	45 37.1	37 9.80	+14.62	+0 9.42	+10.20	-0.43	-9.30	5 46 18.42	51 46 40.3
5 46 41.5	8.8	47 54.20	47 41.9	22 10.50	+9.93	+0 9.42	+10.54	-0.45	-9.30	5 48 17.52	52 1 34.7
ZONE 156, FEBRUARY 7, 1872.											
3 36 24.2	6.8	37 28.00	37 17.0	5 17.10	+9.02	+0 10.30	+10.14	+0.71	-10.60	3 37 52.30	51 18 56.7
3 37 58.8	8.5	39 3.52	38 45.1	50 0.05	+15.02	+0 10.31	+10.41	+0.70	-10.60	3 39 27.88	51 34 19.7
3 40 26.0	8.6	41 31.04	41 20.8	40 24.30	+8.47	+0 10.30	+9.48	+0.67	-10.30	3 41 55.27	50 43 47.8
3 42 57.9	9.0	44 1.96	43 43.7	24 35.60	+15.44	+0 10.29	+8.10	+0.64	-10.10	3 44 26.07	49 59 41.7
3 45 51.3	8.5	46 55.06	46 29.1	4 31.95	+21.79	+0 10.29	+8.39	+0.62	-10.20	3 47 19.23	50 19 51.2
3 48 0.3	8.2	49 4.92	48 52.9	16 2.40	+9.89	+0 10.30	+9.87	+0.60	-10.50	3 49 29.22	51 8 9.5
3 51 3.0	8.3	52 7.48	51 43.6	7 18.30	+20.05	+0 10.29	+8.61	+0.57	-10.30	3 52 31.65	50 17 2.1
3 54 47.2	8.7	55 52.16	55 25.6	59 28.85	+22.25	+0 10.29	+8.46	+0.54	-10.30	3 56 16.37	50 24 52.8
3 57 35.3	8.1	58 40.48	58 5.3	48 10.10	+29.33	+0 10.29	+8.69	+0.52	-10.40	3 59 4.72	50 36 18.1
3 59 18.8	9.8	0 25.70	0 20.5	55 14.65	+4.25	+0 10.31	+10.11	+0.50	-10.70	4 0 50.10	51 28 49.2
4 2 15.0	9.0	3 21.10	2 56.9	24 37.35	+20.41	+0 10.28	+8.04	+0.47	-10.30	4 3 45.24	49 59 40.3
4 4 22.1	9.0	5 28.08	4 57.2	52 10.00	+25.79	+0 10.29	+8.80	+0.46	-10.40	4 5 52.32	50 32 13.3
4 6 35.5	9.1	7 42.68	7 11.7	54 16.60	+25.89	+0 10.30	+8.52	+0.44	-10.40	4 8 6.93	50 30 5.9
4 8 49.5	9.2	9 57.42	9 30.3	26 38.50	+21.92	+0 10.32	+10.61	+0.42	-10.90	4 10 21.93	51 57 41.1
4 11 25.4	8.6	12 32.26	12 8.1	5 55.50	+19.86	+0 10.31	+9.96	+0.40	-10.60	4 12 56.66	51 18 21.1
4 13 7.2	6.8	14 13.58	13 55.7	45 40.40	+14.58	+0 10.31	+10.41	+0.38	-10.70	4 14 38.03	51 38 30.9
4 16 22.4	9.1	17 30.16	17 12.6	25 24.00	+14.23	+0 10.32	+10.87	+0.35	-10.90	4 17 54.67	51 58 46.4
4 16 22.4	9.0	17 32.18	.....	.....	.....	+0 10.32	.....	+0.35	.....	4 17 56.69	.....
4 19 0.8	9.1	20 9.38	19 39.2	49 10.15	+24.64	+0 10.31	+9.81	+0.33	-10.70	4 20 33.82	51 35 9.2
4 24 46.2	9.1	25 54.58	25 46.9	47 18.40	+6.14	+0 10.33	+11.46	+0.28	-11.00	4 26 19.22	52 36 42.4
4 24 55.2	8.0	26 3.69	25 33.4	47 18.40	+24.15	+0 10.33	+11.45	+0.29	-11.00	4 26 28.34	52 37 0.4
4 28 7.1	8.5	29 14.48	28 48.3	0 29.15	+21.46	+0 10.31	+10.08	+0.26	-10.60	4 29 38.90	51 23 45.2
4 32 37.3	8.7	33 46.92	33 21.5	39 7.40	+20.18	+0 10.34	+11.34	+0.21	-11.00	4 34 11.59	52 45 5.4
4 35 36.4	8.7	36 45.66	36 14.2	36 39.65	+25.57	+0 10.32	+10.38	+0.19	-10.70	4 37 10.15	51 47 37.2
4 37 29.9	9.2	38 38.32	38 41.4	40 39.40	-2.58	+0 10.30	+9.36	+0.18	-10.40	4 39 2.61	50 43 8.1
4 40 40.0	8.8	41 47.88	42 2.9	4 56.20	-12.57	+0 10.30	+9.00	+0.15	-10.30	4 42 12.10	50 18 40.3
4 44 17.6	8.0	45 26.26	44 54.5	46 34.85	+25.91	+0 10.32	+10.17	+0.12	-10.60	4 45 50.72	51 37 40.1
4 46 32.9	8.7	47 42.14	47 18.2	37 19.05	+19.82	+0 10.31	+9.23	+0.10	-10.40	4 48 6.44	50 46 48.5
4 50 28.0	8.6	51 36.06	51 7.9	51 33.30	+23.52	+0 10.31	+8.86	+0.07	-10.20	4 52 0.31	50 32 36.8
4 52 10.1	8.7	53 19.00	53 3.2	57 4.90	+13.21	+0 10.31	+8.91	+0.06	-10.20	4 53 43.24	50 26 54.5
ZONE 157, FEBRUARY 8, 1872.											
3 54 47.2	8.6	55 51.80	56 6.6	58 53.00	-12.38	+0 10.62	+8.48	+0.57	-10.40	3 56 16.37	50 24 54.7
3 57 35.3	8.2	58 40.02	58 13.7	48 3.10	+21.92	+0 10.63	+8.68	+0.54	-10.50	3 59 4.62	50 36 18.4
4 2 15.0	9.0	3 20.74	3 37.3	24 2.30	-14.00	+0 10.61	+8.01	+0.50	-10.30	4 3 45.24	49 59 41.7
4 4 22.1	8.9	5 27.58	5 3.9	52 5.10	+19.69	+0 10.63	+8.76	+0.49	-10.40	4 5 52.19	50 32 12.8
4 6 16.8	7.0	7 21.43	7 35.9	50 39.95	-12.09	+0 10.63	+9.04	+0.47	-10.50	4 7 46.04	50 33 5.8
4 8 49.5	9.6	9 57.12	9 38.8	26 30.75	+14.80	+0 10.66	+10.56	+0.45	-10.90	4 10 22.00	51 57 42.5
4 11 25.4	8.9	12 31.94	12 12.2	5 52.85	+16.16	+0 10.63	+9.84	+0.42	-10.70	4 12 56.68	51 18 20.6
4 13 7.2	6.9	14 13.32	13 55.4	45 41.05	+14.58	+0 10.65	+10.25	+0.41	-10.80	4 14 38.14	51 38 30.8
4 16 22.4	9.1	17 30.06	17 10.6	25 25.15	+15.77	+0 10.65	+10.69	+0.38	-10.90	4 17 54.93	51 58 47.4

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
4 16 22.4	9.3	17 31.80	.....	.....	.....	+0 10.65	.....	+0.38	.....	4 17 56.67	.....
4 19 0.8	...	20 9.00	19 52.1	49 0.50	+13.79	+0 10.65	+ 9.92	+0.36	-10.80	4 20 33.81	51 35 8.8
4 24 46.2	9.2	25 54.24	25 34.8	47 29.40	+15.46	+0 10.66	+11.16	+0.31	-11.10	4 26 19.24	52 36 41.2
4 24 55.2	8.3	26 3.37	25 20.2	47 29.40	+34.43	+0 10.66	+10.78	+0.31	-11.10	4 26 28.37	52 36 59.7
4 28 7.1	8.5	29 14.12	28 46.1	0 31.65	+22.93	+0 10.65	+ 9.88	+0.29	-10.70	4 29 38.91	51 23 44.7
4 32 37.3	8.7	33 46.62	33 28.8	39 2.25	+14.14	+0 10.67	+11.22	+0.24	-11.00	4 34 11.65	52 45 5.2
4 35 36.4	8.5	36 45.34	36 14.9	36 40.15	+24.68	+0 10.66	+10.20	+0.22	-10.80	4 37 10.20	51 47 36.3
4 37 29.9	9.4	38 38.06	38 32.6	40 46.55	+ 4.57	+0 10.63	+ 9.31	+0.21	-10.50	4 39 2.71	50 43 8.7
4 40 40.0	9.1	41 47.68	41 23.3	5 29.90	+20.45	+0 10.63	+ 8.69	+0.18	-10.30	4 42 12.26	50 18 40.1
4 44 17.6	7.9	45 25.92	44 58.9	46 30.05	+22.00	+0 10.65	+10.10	+0.14	-10.70	4 45 50.73	51 37 41.6
4 46 32.9	8.9	47 41.70	47 13.5	37 22.40	+23.41	+0 10.65	+ 8.99	+0.13	-10.40	4 48 6.37	50 46 49.3
4 50 28.0	8.5	51 35.74	51 21.2	51 20.80	+12.10	+0 10.64	+ 9.07	+0.09	-10.30	4 52 0.34	50 32 38.8
4 52 10.1	...	53 18.66	53 1.8	57 6.05	+14.13	+0 10.65	+ 8.74	+0.08	-10.30	4 53 43.26	50 26 54.8
ZONE 158, FEBRUARY 12, 1872.											
4 44 9.0	8.9	45 16.92	44 54.1	15 6.35	+18.81	+0 11.61	+ 9.28	+0.24	-10.80	4 45 42.71	51 9 0.9
4 46 32.9	8.7	47 40.66	47 12.1	37 21.05	+23.70	+0 11.61	+ 8.72	+0.22	-10.70	4 48 6.38	50 46 50.2
4 50 11.8	8.9	51 17.40	51 5.9	19 51.00	+ 9.69	+0 11.59	+ 8.31	+0.19	-10.50	4 51 42.97	50 4 5.1
4 50 11.8	9.0	51 17.92	51 9.2	19 51.00	+ 7.33	+0 11.59	+ 8.32	+0.19	-10.50	4 51 43.49	50 4 2.8
4 52 7.0	8.9	53 11.42	52 46.6	33 34.95	+20.56	+0 11.61	+ 8.59	+0.17	-10.70	4 53 37.13	50 50 31.6
4 54 20.9	8.9	55 28.80	55 0.3	31 39.20	+24.11	+0 11.59	+ 7.85	+0.16	-10.40	4 55 54.34	49 52 29.9
4 56 45.2	8.9	57 53.82	57 22.6	56 41.15	+26.07	+0 11.60	+ 8.28	+0.13	-10.60	4 58 19.45	50 27 29.6
5 4 29.3	7.8	5 36.26	5 9.8	59 10.40	+22.17	+0 11.59	+ 8.01	+0.07	-10.50	5 6 1.85	50 24 54.3
5 6 5.3	9.3	7 12.16	6 47.1	57 9.00	+20.98	+0 11.59	+ 8.30	+0.06	-10.50	5 7 37.76	50 26 54.4
5 20 34.6	7.9	21 41.52	22 1.4	15 2.75	-16.39	+0 11.62	+ 9.39	-0.07	-10.50	5 22 7.19	51 8 20.6
5 23 3.7	8.0	24 13.38	23 45.9	34 16.05	+22.39	+0 11.64	+ 9.57	-0.09	-10.60	5 24 39.19	51 49 45.5
5 27 8.9	8.5	28 17.88	28 24.1	29 7.35	- 5.13	+0 11.62	+ 8.75	-0.12	-10.40	5 28 43.49	50 54 25.0
5 28 53.5	8.6	30 0.96	29 38.8	26 48.45	+18.75	+0 11.60	+ 7.90	-0.13	-10.10	5 30 26.37	49 57 6.8
5 32 48.6	8.0	33 55.86	33 24.8	39 32.55	+25.83	+0 11.62	+ 8.28	-0.17	-10.20	5 34 21.40	50 44 29.0
5 37 48.9	8.8	38 57.38	38 23.3	50 24.85	+28.43	+0 11.60	+ 8.48	-0.21	-10.10	5 39 22.84	50 33 38.3
5 39 31.6	9.1	40 40.40	40 10.9	44 5.05	+24.55	+0 11.62	+ 8.29	-0.22	-10.10	5 41 5.89	50 39 53.6
5 44 34.2	8.5	45 44.34	45 8.7	32 52.35	+28.86	+0 11.64	+ 9.59	-0.28	-10.30	5 46 10.01	51 51 10.4
5 45 52.5	8.8	46 59.98	46 41.1	3 48.10	+15.83	+0 11.60	+ 8.04	-0.26	- 9.80	5 47 25.37	50 20 0.2
5 48 46.5	6.5	49 53.32	49 23.8	19 52.45	+24.33	+0 11.62	+ 8.63	-0.29	-10.00	5 50 18.83	51 4 3.9
5 51 34.6	6.0	52 40.66	52 4.1	29 56.20	+30.94	+0 11.60	+ 7.89	-0.31	- 9.60	5 53 5.92	49 54 5.8
5 54 36.7	9.3	55 46.18	55 19.7	51 50.75	+21.63	+0 11.64	+ 9.53	-0.36	-10.00	5 56 11.72	51 32 2.4
5 56 6.9	9.5	57 16.44	57 34.5	1 49.65	-14.75	+0 11.64	+ 9.47	-0.37	- 9.80	5 57 41.94	51 21 26.8
ZONE 159, FEBRUARY 14, 1872.											
4 41 2.7	8.9	42 9.12	41 53.4	47 51.75	+13.08	+0 11.66	+ 8.63	+0.32	-10.70	4 42 34.92	50 36 10.8
4 44 37.9	9.0	45 44.28	45 12.1	17 54.35	+26.54	+0 11.66	+ 9.02	+0.28	-10.90	4 46 10.15	51 6 21.0
4 50 11.8	8.9	51 17.32	50 41.6	20 12.30	+30.08	+0 11.65	+ 8.10	+0.24	-10.60	4 51 43.00	50 4 4.6
4 50 11.8	9.0	51 17.74	50 43.5	20 12.30	+28.82	+0 11.65	+ 8.14	+0.24	-10.60	4 51 43.42	50 4 3.4
4 52 7.0	8.9	53 11.32	52 56.1	33 27.35	+12.60	+0 11.66	+ 8.88	+0.22	-10.80	4 53 37.13	50 50 32.1
4 54 20.9	8.8	55 28.72	54 53.6	31 46.25	+29.69	+0 11.64	+ 7.87	+0.20	-10.50	4 55 54.35	49 52 29.0
4 56 45.2	8.9	57 53.70	57 20.6	56 44.05	+27.66	+0 11.65	+ 8.40	+0.18	-10.70	4 58 19.43	50 27 29.0
.....	9.3	2 52.14	3 9.8	29 22.50	-14.65	+0 11.65	+ 8.81	+0.13	-10.80	5 3 17.92	50 54 7.1
5 4 29.3	7.4	5 36.26	5 4.1	59 17.00	+26.87	+0 11.65	+ 8.06	+0.11	-10.60	5 6 1.95	50 24 53.0
5 6 5.3	9.3	7 11.92	6 50.2	57 8.40	+18.14	+0 11.65	+ 8.50	+0.10	-10.60	5 7 37.62	50 26 52.9
5 12 38.2	8.7	13 44.92	13 25.0	3 10.90	+16.67	+0 11.65	+ 8.30	+0.04	-10.50	5 14 10.57	50 20 47.1

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R.A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
5 14 46.5	8.8	15 54.72	15 25.4	30 6.00	+24.26	+0 11.64	+ 9.19	+0.02	-10.70	5 16 20.44	50 53 59.8
5 16 49.6	9.5	18 1.10	17 52.1	1 4.35	+ 7.53	+0 11.64	+ 8.65	+0.01	-10.50	5 18 26.73	50 22 43.8
5 20 34.6	7.3	21 41.48	21 6.2	15 46.60	+29.07	+0 11.64	+ 9.25	-0.03	-10.70	5 22 7.21	51 8 22.5
5 23 3.7	8.6	24 13.36	23 42.8	34 20.45	+24.82	+0 11.66	+ 9.70	-0.05	-10.80	5 24 39.23	51 49 44.1
5 27 8.9	9.2	28 17.86	28 3.4	29 27.05	+12.00	+0 11.64	+ 9.84	-0.08	-10.50	5 28 43.53	50 54 24.1
5 28 53.5	8.3	30 0.84	29 35.1	26 53.95	+21.70	+0 11.63	+ 7.99	-0.09	-10.20	5 30 26.32	49 57 4.9
5 32 48.6	7.9	33 55.72	33 23.4	39 36.80	+26.83	+0 11.63	+ 8.54	-0.13	-10.40	5 34 21.31	50 44 26.5
5 37 48.9	8.8	38 57.34	38 25.4	50 26.25	+26.60	+0 11.63	+ 8.68	-0.17	-10.30	5 39 22.87	50 33 35.8
5 39 31.6	8.7	40 40.36	40 19.8	43 59.70	+17.14	+0 11.63	+ 8.57	-0.18	-10.30	5 41 5.90	50 39 52.3
ZONE 160, FEBRUARY 16, 1872.											
5 39 31.6	9.2	40 40.00	40 25.7	43 55.10	+11.89	+0 11.91	+ 8.52	-0.14	-10.50	5 41 5.86	50 39 53.1
5 44 43.7	8.5	45 52.34	45 35.7	51 58.60	+13.56	+0 11.92	+ 9.68	-0.19	-10.60	5 46 18.32	51 31 51.0
5 46 44.2	8.6	47 53.84	47 44.9	16 46.60	+ 7.33	+0 11.91	+ 9.31	-0.20	-10.40	5 48 19.73	51 6 56.0
5 48 46.5	6.5	49 52.98	49 33.2	19 46.80	+16.33	+0 11.92	+ 9.43	-0.22	-10.40	5 50 18.86	51 4 4.4
5 52 20.7	8.8	53 29.12	53 12.0	47 15.00	+14.24	+0 11.91	+ 8.64	-0.24	-10.20	5 53 54.89	50 36 32.6
5 54 36.7	9.4	55 45.86	55 23.9	51 48.35	+17.96	+0 11.93	+ 9.66	-0.27	-10.40	5 56 11.78	51 32 3.2
5 56 6.9	9.5	57 16.56	57 36.6	58 11.05	-16.37	+0 11.93	+ 9.36	-0.28	-10.40	5 57 42.44	51 25 5.4
5 58 41.4	8.5	59 47.90	59 30.8	13 9.90	+14.37	+0 11.90	+ 8.05	-0.29	-10.00	6 0 13.53	50 10 35.8
6 1 5.6	8.0	2 13.42	2 3.7	25 26.85	+ 8.19	+0 11.90	+ 8.28	-0.31	- 9.90	6 2 39.00	49 58 12.3
6 3 8.4	8.5	4 17.66	4 7.7	35 17.70	+ 8.29	+0 11.92	+ 9.15	-0.33	-10.10	6 4 43.39	50 48 21.7
6 5 35.3	8.6	6 46.86	6 25.5	1 19.85	+17.15	+0 11.95	+10.69	-0.38	-10.50	6 7 12.84	52 22 28.9
6 8 0.6	9.1	9 11.16	8 54.6	57 43.80	+13.28	+0 11.95	+10.61	-0.40	-10.40	6 9 37.13	52 26 0.5
6 16 48.4	9.1	17 57.52	17 46.7	9 32.10	+ 9.07	+0 11.90	+ 7.99	-0.43	- 9.60	6 18 23.01	50 14 3.9
6 20 24.0	8.8	21 32.98	21 15.1	36 33.30	+14.85	+0 11.92	+ 9.07	-0.47	- 9.60	6 21 58.54	50 47 8.6
6 25 51.3	9.3	27 2.20	26 42.2	47 48.50	+16.30	+0 11.93	+ 9.62	-0.52	- 9.70	6 27 27.85	51 35 54.0
6 30 3.8	8.7	31 13.36	30 51.2	12 21.45	+18.66	+0 11.91	+ 8.13	-0.53	- 9.20	6 31 38.72	50 11 21.2
6 31 57.9	8.8	33 5.62	32 57.5	31 36.10	+ 6.85	+0 11.91	+ 8.14	-0.54	- 9.10	6 33 30.91	49 51 54.3
6 35 6.3	7.5	36 12.36	35 53.0	53 14.35	+16.19	+0 11.92	+ 8.39	-0.57	- 9.10	6 36 37.73	50 30 24.9
6 42 3.0	7.5	43 10.80	42 45.5	43 47.20	+20.59	+0 11.95	+ 9.55	-0.65	- 9.20	6 43 36.29	51 39 55.7
6 44 28.8	8.6	45 39.46	45 10.7	31 38.45	+23.34	+0 11.95	+10.00	-0.67	- 9.20	6 46 4.96	51 52 7.0
6 45 37.9	8.0	46 44.52	46 36.1	13 44.15	+ 6.91	+0 11.93	+ 9.12	-0.66	- 9.00	6 47 9.88	51 9 43.9
6 47 48.3	7.6	48 55.86	48 37.8	25 2.60	+14.96	+0 11.93	+ 9.33	-0.67	- 8.90	6 49 21.17	50 58 33.3
6 50 4.5	9.5	51 13.50	50 53.9	7 45.40	+16.09	+0 11.93	+ 9.27	-0.70	- 8.90	6 51 38.82	51 15 50.9
6 52 43.8	7.8	53 51.14	53 26.9	55 50.10	+19.78	+0 11.94	+ 9.69	-0.72	- 8.80	6 54 16.47	51 27 49.8
ZONE 161, FEBRUARY 17, 1872.											
5 37 49.6	8.5	38 56.62	38 40.2	20 28.55	+13.82	+0 12.19	+ 8.40	-0.10	-10.40	5 39 22.72	50 3 21.9
5 39 31.6	9.5	40 39.72	41 5.9	43 20.15	-21.79	+0 12.21	+ 8.59	-0.12	-10.60	5 41 5.90	50 39 54.2
5 44 43.7	8.5	45 52.02	45 29.6	52 3.55	+18.29	+0 12.21	+ 9.75	-0.17	-10.70	5 46 18.31	51 31 50.6
5 46 44.2	9.2	47 53.48	47 35.4	16 53.55	+14.91	+0 12.21	+ 9.35	-0.18	-10.50	5 48 19.69	51 6 56.5
5 48 46.5	6.7	49 52.68	49 29.1	19 51.60	+19.46	+0 12.21	+ 9.50	-0.20	-10.50	5 50 18.87	51 4 2.5
5 52 20.7	8.8	53 28.74	53 15.8	47 11.90	+10.74	+0 12.20	+ 8.79	-0.22	-10.30	5 53 54.82	50 36 32.1
5 54 36.7	9.5	55 45.48	55 31.9	51 43.80	+11.10	+0 12.21	+ 9.87	-0.25	-10.50	5 56 11.70	51 32 0.9
5 58 41.4	8.8	59 47.52	0 6.4	12 38.15	-15.88	+0 12.19	+ 8.22	-0.27	-10.10	6 0 13.46	50 10 37.2
6 1 5.6	8.0	2 13.12	1 57.4	25 32.85	+13.25	+0 12.19	+ 8.34	-0.29	-10.00	6 2 39.01	49 58 11.2
6 3 8.4	8.5	4 17.40	4 1.3	35 23.35	+13.35	+0 12.21	+ 9.22	-0.31	-10.20	6 4 43.44	50 48 21.0
6 5 35.3	8.8	6 46.50	6 24.2	1 22.55	+17.87	+0 12.23	+10.80	-0.36	-10.60	6 7 12.78	52 22 26.8
6 8 0.6	9.2	9 10.76	8 53.6	57 44.25	+13.76	+0 12.23	+10.77	-0.37	-10.50	6 9 37.04	52 26 0.4
6 16 48.4	9.4	17 57.26	18 23.0	8 58.55	-21.52	+0 12.19	+ 8.03	-0.41	- 9.70	6 18 23.06	50 14 6.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
6 20 24.0	9.0	21 32.54	21 22.6	36 27.60	+ 8.21	+0 12.21	+ 9.12	-0.45	- 9.70	6 21 58.41	50 47 7.5
6 22 56.8	9.0	24 3.54	23 51.7	27 12.30	+ 9.97	+0 12.19	+ 8.14	-0.45	- 9.50	6 24 29.24	49 56 23.1
6 25 10.8	9.0	26 24.48	26 5.7	54 8.30	+15.36	+0 12.21	+ 9.48	-0.50	- 9.80	6 26 50.42	51 29 32.9
6 27 0.7	8.0	28 8.03	28 27.0	44 18.25	-15.81	+0 12.20	+ 8.54	-0.50	- 9.50	6 28 33.80	50 38 50.7
6 30 3.8	8.6	31 13.00	30 53.1	12 19.50	+16.72	+0 12.19	+ 8.28	-0.51	- 9.30	6 31 38.66	50 11 21.1
6 31 57.9	8.8	33 5.42	32 55.8	31 38.30	+ 8.12	+0 12.19	+ 8.23	-0.52	- 9.30	6 33 31.01	49 51 53.2
6 35 6.3	7.5	36 12.12	35 49.2	53 17.75	+19.12	+0 12.20	+ 8.48	-0.55	- 9.30	6 36 37.79	50 30 24.2
6 42 3.0	7.5	43 10.56	42 51.9	43 41.70	+15.22	+0 12.22	+ 9.78	-0.63	- 9.40	6 43 36.34	51 39 55.7
6 45 37.9	8.0	46 44.34	46 23.7	13 53.65	+16.95	+0 12.21	+ 9.13	-0.65	- 9.10	6 47 9.99	51 9 44.2
6 47 48.3	...	48 55.56	48 39.2	25 1.75	+13.55	+0 12.21	+ 9.49	-0.66	- 9.00	6 49 21.16	50 58 32.6
6 50 4.5	10.0	51 13.22	51 0.0	7 39.85	+10.84	+0 12.21	+ 9.48	-0.68	- 9.00	6 51 38.84	51 15 51.2
6 52 43.8	7.8	53 50.84	53 22.5	55 52.70	+23.14	+0 12.21	+ 9.77	-0.71	- 9.00	6 54 16.45	51 27 50.3
ZONE 162, FEBRUARY 24, 1872.											
5 44 44.8	7.5	45 50.26	45 27.3	36 51.90	+18.68	+0 13.85	+ 9.48	0.00	-11.40	5 46 18.40	51 46 40.4
5 48 7.7	...	49 11.60	48 49.9	29 0.95	+18.34	+0 13.80	+ 7.18	+0.02	-10.80	5 49 39.40	49 54 28.4
5 49 22.6	8.6	50 27.48	50 16.0	25 19.15	+ 9.62	+0 13.80	+ 7.87	+0.02	-10.80	5 50 55.29	49 58 1.7
6 9 17.4	9.0	10 24.66	9 55.3	21 46.20	+24.79	+0 13.82	+ 7.65	-0.21	-10.60	6 10 52.26	50 1 44.7
6 11 49.8	8.7	12 55.60	12 26.2	55 29.35	+24.56	+0 13.83	+ 8.15	-0.23	-10.70	6 13 23.27	50 28 1.1
6 13 43.9	7.7	14 49.62	14 19.0	41 41.35	+24.89	+0 13.86	+ 9.33	-0.26	-11.00	6 15 17.50	51 41 49.9
6 21 12.2	8.0	22 18.86	21 54.9	20 52.85	+19.81	+0 13.84	+ 8.83	-0.32	-10.70	6 22 46.53	51 2 31.0
6 23 1.7	8.3	24 7.68	23 38.1	12 22.55	+24.35	+0 13.84	+ 8.69	-0.34	-10.70	6 24 35.35	51 11 5.3
6 25 10.8	8.8	26 22.70	25 48.7	53 57.70	+27.79	+0 13.85	+ 8.71	-0.36	-10.80	6 26 50.42	51 29 32.9
6 27 0.7	8.0	28 6.28	27 38.3	44 36.20	+23.31	+0 13.83	+ 7.85	-0.36	-10.50	6 28 33.82	50 38 48.9
6 30 46.0	9.5	31 53.12	31 39.3	38 37.90	+11.55	+0 13.84	+ 8.25	-0.40	-10.40	6 32 20.64	50 44 35.0
6 30 49.9	9.4	31 56.58	31 35.6	38 37.90	+17.53	+0 13.84	+ 8.18	-0.40	-10.40	6 32 24.10	50 44 40.8
6 33 0.1	8.7	34 8.18	33 35.7	30 27.20	+25.74	+0 13.87	+10.78	-0.46	-11.00	6 34 36.04	52 53 1.2
6 35 37.3	8.8	36 43.84	36 17.6	29 15.75	+21.68	+0 13.85	+ 8.18	-0.44	-10.40	6 37 11.33	50 54 5.9
6 38 28.6	9.2	39 35.24	39 8.6	24 37.85	+21.98	+0 13.85	+ 8.21	-0.44	-10.40	6 40 2.74	50 58 43.4
6 44 28.8	8.6	45 37.30	45 23.1	31 4.45	+11.51	+0 13.87	+ 9.80	-0.53	-10.50	6 46 4.86	51 52 6.3
6 46 2.4	9.2	47 5.36	46 58.3	18 0.15	+ 5.98	+0 13.83	+ 7.63	-0.51	- 9.90	6 47 32.58	50 5 3.1
6 50 7.4	9.0	51 14.00	51 8.7	50 25.93	+ 4.33	+0 13.86	+ 9.61	-0.58	-10.20	6 51 41.42	51 32 36.3
6 53 4.9	9.3	54 9.88	53 55.1	15 24.35	+12.45	+0 13.83	+ 8.01	-0.57	- 9.80	6 54 37.02	50 7 44.0
6 57 32.8	8.6	58 38.02	58 15.2	26 15.15	+19.25	+0 13.83	+ 7.67	-0.61	- 9.60	6 59 5.07	49 56 58.8
6 59 13.4	8.7	0 19.34	59 52.0	16 25.20	+22.97	+0 13.84	+ 7.71	-0.62	- 9.60	7 0 46.41	50 6 52.0
ZONE 163, FEBRUARY 27, 1872.											
5 44 44.8	6.5	45 50.46	45 19.9	37 0.45	+24.85	+0 13.43	+ 9.95	+0.08	-11.50	5 46 18.26	51 46 41.3
5 48 7.7	6.2	49 11.80	48 59.0	28 56.00	+10.82	+0 13.39	+ 7.73	+0.05	-11.10	5 49 39.22	49 54 29.0
5 49 22.6	8.5	50 27.72	50 20.6	25 18.70	+ 5.99	+0 13.39	+ 8.36	+0.05	-11.10	5 50 55.15	49 58 1.6
5 52 57.7	9.0	54 4.70	53 39.7	28 50.55	+21.13	+0 13.39	+ 7.74	+0.01	-11.10	5 54 32.08	49 54 43.5
5 56 6.9	9.6	57 14.22	56 56.1	2 3.60	+14.84	+0 13.41	+ 9.60	-0.02	-11.40	5 57 41.84	51 21 24.9
5 57 41.7	9.2	58 49.40	58 21.9	31 2.90	+22.78	+0 13.40	+ 9.11	-0.03	-11.30	5 59 16.92	50 52 32.7
6 1 21.2	9.0	2 27.92	2 5.8	45 43.90	+18.40	+0 13.39	+ 8.95	-0.07	-11.10	6 2 55.34	50 37 46.4
6 3 8.4	8.8	4 15.90	3 45.9	35 16.35	+24.88	+0 13.40	+ 9.08	-0.09	-11.20	6 4 43.35	50 48 20.0
6 5 37.7	8.4	6 45.48	6 13.6	48 53.30	+25.45	+0 13.43	+10.55	-0.12	-11.70	6 7 13.24	52 34 44.0
6 9 17.4	9.2	10 24.98	10 5.0	21 42.25	+16.78	+0 13.37	+ 8.00	-0.13	-10.90	6 10 52.21	50 1 43.6

ZONE 164, MARCH 11, 1872.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	° "	"	m s	"	s	"	h m s	° ' "
5 48 7.7	6.0	49 10.72	48 48.6	29 1.75	+18.68	+0 14.18	+ 7.59	+0.40	-11.70	5 49 39.28	49 54 29.6
5 49 53.0	8.8	50 57.34	50 37.7	24 43.80	+16.55	+0 14.18	+ 7.61	+0.39	-11.70	5 51 25.90	49 58 45.0
5 52 57.7	8.9	54 3.58	53 32.6	28 52.40	+26.20	+0 14.18	+ 7.59	+0.35	-11.70	5 54 32.09	49 54 45.3
5 56 6.9	9.4	57 13.12	56 40.8	2 12.40	+26.48	+0 14.21	+ 9.29	+0.33	-12.20	5 57 41.89	51 21 25.9
5 57 41.7	8.9	58 48.30	58 29.3	30 54.10	+15.74	+0 14.20	+ 9.09	+0.32	-12.00	5 59 16.97	50 52 33.0
6 1 21.2	8.6	2 26.74	1 57.9	45 46.10	+23.98	+0 14.18	+ 8.73	+0.28	-11.90	6 2 55.30	50 37 48.1
6 3 8.4	8.6	4 14.68	8 46.6	35 11.55	+23.31	+0 14.20	+ 8.87	+0.26	-12.00	6 4 43.28	50 48 21.5
6 5 37.7	8.0	6 44.32	6 14.6	48 47.05	+23.69	+0 14.22	+10.46	+0.23	-12.60	6 7 13.22	52 34 46.7
6 9 17.4	9.1	10 23.82	10 0.3	21 41.60	+19.82	+0 14.18	+ 8.00	+0.20	-11.70	6 10 52.19	50 1 45.8
6 11 49.8	8.7	12 54.76	12 24.5	55 31.35	+25.31	+0 14.20	+ 8.51	+0.18	-11.90	6 13 23.21	50 28 1.2
6 13 43.9	7.2	14 48.72	14 16.4	41 44.25	+26.27	+0 14.22	+ 9.71	+0.16	-12.30	6 15 17.38	51 41 49.6
6 21 12.2	7.8	22 18.10	21 52.3	20 54.10	+21.29	+0 14.19	+ 9.21	+0.09	-12.00	6 22 46.53	51 2 32.6
6 23 1.7	8.2	24 6.86	23 45.8	12 16.65	+17.36	+0 14.19	+ 9.24	+0.07	-12.00	6 24 35.29	51 11 5.6
6 25 10.8	8.9	26 21.88	25 54.5	53 52.55	+22.39	+0 14.20	+ 9.32	+0.05	-12.10	6 26 50.36	51 29 34.2
6 27 0.7	8.0	28 5.34	27 42.7	44 33.00	+18.81	+0 14.17	+ 8.39	+0.04	-11.80	6 28 33.62	50 38 49.1
6 30 46.0	9.4	31 52.28	31 38.8	38 38.20	+11.21	+0 14.19	+ 8.68	0.00	-11.80	6 32 20.55	50 44 35.6
6 30 49.9	9.3	31 55.72	31 34.0	38 38.20	+18.02	+0 14.19	+ 8.60	0.00	-11.80	6 32 23.99	50 44 42.2
6 33 0.1	8.7	34 7.28	33 36.0	30 25.95	+24.79	+0 14.22	+11.22	-0.04	-12.50	6 34 35.91	52 53 2.7
6 35 37.3	8.6	36 43.02	36 19.6	29 15.30	+19.37	+0 14.19	+ 8.67	-0.05	-11.80	6 37 11.24	50 54 5.4
6 38 28.6	9.2	39 34.52	39 8.5	24 37.25	+21.48	+0 14.20	+ 8.69	-0.06	-11.80	6 40 2.75	50 58 44.8
6 44 28.8	9.2	45 36.62	45 2.0	31 19.30	+28.04	+0 14.21	+ 9.88	-0.14	-12.10	6 46 4.91	51 52 8.6
6 46 2.4	9.4	47 4.59	47 0.4	17 55.95	+ 3.54	+0 14.17	+ 8.04	-0.14	-11.50	6 47 32.52	50 5 5.9
6 50 7.4	9.6	51 13.20	50 45.3	50 44.70	+22.78	+0 14.20	+ 9.73	-0.19	-11.80	6 51 41.35	51 32 36.7
6 53 4.9	9.8	54 9.12	53 40.6	15 35.00	+23.97	+0 14.17	+ 8.17	-0.20	-11.40	6 54 36.97	50 7 45.7
6 57 32.8	9.2	58 37.42	58 7.9	26 20.45	+24.91	+0 14.17	+ 7.92	-0.24	-11.30	6 59 5.18	49 56 59.9
6 59 13.4	9.4	0 18.70	0 36.4	15 46.50	-14.89	+0 14.17	+ 8.26	-0.26	-11.30	7 0 46.46	50 6 54.0

ZONE 165, MARCH 14, 1872.

6 41 59.8	9.3	43 6.64	43 25.3	35 51.15	-15.18	+0 14.39	+ 9.94	-0.03	-12.30	6 43 35.22	51 46 53.3
6 42 7.8	8.7	43 11.40	42 42.1	35 51.15	+23.79	+0 14.39	+ 9.83	-0.03	-12.30	6 43 39.98	51 47 32.1
6 43 56.5	8.6	45 1.12	45 3.3	39 27.60	- 1.83	+0 14.37	+ 8.57	-0.04	-11.90	6 45 29.47	50 43 28.7
6 50 37.8	8.6	51 42.98	51 16.7	57 40.55	+21.52	+0 14.38	+ 9.31	-0.11	-12.10	6 52 11.37	51 25 37.9
6 52 43.8	7.9	53 48.04	53 20.7	55 29.35	+22.32	+0 14.38	+ 9.55	-0.13	-12.10	6 54 16.40	51 27 49.6
6 54 35.3	9.1	55 40.96	55 14.2	36 37.45	+22.24	+0 14.37	+ 8.72	-0.14	-11.80	6 56 9.18	50 46 40.5
6 56 28.2	9.4	57 34.02	57 13.3	58 22.85	+16.94	+0 14.38	+ 9.28	-0.17	-12.00	6 58 2.31	51 24 49.6
6 58 52.0	9.1	59 56.32	59 44.6	30 7.45	+ 9.89	+0 14.36	+ 8.14	-0.18	-11.50	7 0 24.31	49 52 56.7
7 0 52.3	6.8	1 55.28	1 30.6	23 43.70	+20.84	+0 14.36	+ 7.65	-0.20	-11.50	7 2 23.26	49 59 30.4
7 3 17.3	9.8	4 22.28	3 50.9	23 52.35	+25.94	+0 14.37	+ 8.65	-0.23	-11.70	7 4 50.39	50 59 27.0
7 6 26.5	8.0	7 31.62	7 3.3	31 4.15	+22.93	+0 14.39	+ 9.91	-0.27	-11.90	7 7 59.84	51 52 12.5
7 8 27.1	8.7	9 31.38	9 3.4	20 42.25	+23.60	+0 14.36	+ 7.97	-0.26	-11.30	7 9 59.26	50 2 33.2
7 10 59.6	8.8	12 4.58	11 38.2	52 39.70	+21.57	+0 14.38	+ 9.40	-0.30	-11.80	7 12 32.67	51 30 34.1
7 14 17.1	8.1	15 20.60	14 49.7	29 28.65	+26.12	+0 14.36	+ 7.48	-0.32	-11.20	7 15 48.36	49 53 47.5
7 16 44.2	9.2	17 47.88	17 16.5	28 2.35	+26.53	+0 14.36	+ 7.63	-0.34	-11.20	7 18 15.61	49 55 13.8
7 18 38.8	8.6	19 45.24	19 12.9	29 47.45	+26.16	+0 14.39	+10.01	-0.38	-11.70	7 20 13.27	51 53 29.7
7 20 53.9	8.5	21 56.38	21 28.7	58 36.25	+23.17	+0 14.36	+ 8.07	-0.38	-11.20	7 22 24.12	50 24 35.9
7 22 42.5	6.7	23 45.68	23 13.4	48 32.75	+26.34	+0 14.38	+ 9.32	-0.41	-11.60	7 24 13.58	51 34 43.0
7 26 3.8	...	27 8.60	26 43.7	30 8.30	+20.62	+0 14.37	+ 9.02	-0.44	-11.30	7 27 36.32	50 53 0.9
7 28 20.8	...	29 24.14	28 54.3	34 35.95	+24.72	+0 14.37	+ 8.43	-0.45	-11.20	7 29 51.82	50 48 36.3

ZONE 166, MARCH 18, 1872.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	s	s	"	h m s	° ' "
6 41 59.8	9.2	43 6.26	43 18.2	35 57.45	- 9.66	+0 14.73	+10.24	+0.08	-12.50	6 43 35.29	51 46 54.4
6 42 7.8	8.6	43 11.02	42 34.4	35 57.45	+29.04	+0 14.73	+ 9.93	+0.08	-12.50	6 43 40.05	51 47 32.8
6 43 56.5	8.3	45 0.68	44 47.7	39 42.10	+10.80	+0 14.71	+ 8.80	+0.06	-12.20	6 45 29.47	50 43 28.5
6 50 37.8	8.7	51 42.62	51 16.3	57 41.45	+21.52	+0 14.72	+ 9.61	-0.01	-12.40	6 52 11.45	51 25 38.8
6 52 43.8	7.6	53 47.60	53 19.4	55 31.25	+23.05	+0 14.72	+ 9.82	-0.03	-12.40	6 54 16.40	51 27 50.2
6 54 35.3	9.0	55 40.58	55 19.5	36 33.55	+17.51	+0 14.71	+ 9.06	-0.04	-12.10	6 56 9.24	50 46 41.5
6 56 28.2	9.5	57 33.56	57 21.0	58 17.90	+10.31	+0 14.72	+ 9.67	-0.07	-12.30	6 58 2.29	51 24 49.8
7 0 52.3	6.4	1 54.84	1 18.9	23 54.90	+30.29	+0 14.69	+ 7.72	-0.09	-11.80	7 2 23.26	49 59 30.3
7 3 17.3	9.7	4 21.92	3 58.2	23 48.10	+19.58	+0 14.71	+ 9.07	-0.12	-12.10	7 4 50.48	50 59 26.8
7 6 26.5	...	7 31.26	7 6.5	31 3.15	+20.10	+0 14.73	+10.25	-0.16	-12.30	7 7 59.93	51 52 12.4
7 8 27.1	8.8	9 30.88	9 6.1	20 41.75	+20.91	+0 14.69	+ 8.25	-0.16	-11.70	7 9 59.19	50 2 32.7
7 10 59.6	8.8	12 4.08	11 34.7	52 43.30	+24.02	+0 14.72	+ 9.68	-0.20	-12.10	7 12 32.61	51 30 34.7
7 14 17.1	8.9	15 20.06	14 53.2	29 26.55	+22.74	+0 14.69	+ 7.82	-0.21	-11.60	7 15 48.26	49 53 48.0
7 16 44.2	9.2	17 47.56	17 21.4	27 59.10	+22.14	+0 14.69	+ 7.97	-0.24	-11.60	7 18 15.72	49 55 14.4
7 18 38.8	8.8	19 44.80	19 17.0	29 45.65	+22.52	+0 14.73	+10.36	-0.28	-12.10	7 20 13.27	51 53 29.6
7 20 53.9	7.9	21 55.96	21 27.4	58 38.45	+23.93	+0 14.70	+ 8.34	-0.28	-11.60	7 22 24.14	50 24 36.2
7 22 42.5	6.8	23 45.32	23 16.9	48 31.50	+23.16	+0 14.72	+ 9.68	-0.31	-12.00	7 24 13.66	51 34 42.8
7 26 3.8	8.9	27 8.18	26 35.3	30 13.90	+27.24	+0 14.71	+ 9.14	-0.34	-11.70	7 27 36.34	50 53 3.5
7 26 3.8	9.9	27 8.48	27 11.5	30 13.90	- 2.48	+0 14.71	+ 9.41	-0.34	-11.70	7 27 36.64	50 52 34.0

ZONE 167, MARCH 21, 1872.

7 29 8.9	9.0	30 12.87	30 26.1	55 50.15	-10.80	+0 14.87	+10.03	-0.30	-12.10	7 30 41.30	51 26 50.8
7 31 23.9	8.7	32 28.90	32 17.0	49 7.45	+ 9.71	+0 14.87	+ 9.90	-0.32	-12.10	7 32 57.31	51 33 53.4
7 33 1.8	9.2	34 5.82	33 49.0	58 56.15	+13.75	+0 14.87	+ 9.69	-0.33	-12.00	7 34 34.18	51 24 8.2
7 36 53.2	9.5	37 58.80	37 34.7	52 17.45	+20.11	+0 14.85	+ 8.73	-0.35	-11.60	7 38 26.94	50 30 51.8
7 40 17.5	8.9	41 19.35	40 56.1	24 0.05	+19.58	+0 14.84	+ 8.02	-0.38	-11.40	7 41 47.34	49 59 7.4
7 41 37.5	8.9	42 40.34	42 22.1	53 52.65	+15.20	+0 14.85	+ 8.64	-0.40	-11.50	7 43 8.39	50 29 10.6
7 43 55.6	8.8	44 57.98	44 46.0	16 31.15	+10.10	+0 14.84	+ 8.46	-0.41	-11.40	7 45 25.93	50 6 26.2
7 47 30.3	9.3	48 31.88	48 11.5	47 42.50	+17.00	+0 14.85	+ 8.87	-0.45	-11.40	7 48 59.83	50 35 21.5
7 53 50.9	8.4	54 53.82	54 27.6	35 30.80	+21.73	+0 14.86	+ 9.21	-0.51	-11.40	7 55 21.69	50 47 36.8
7 56 40.1	9.2	57 42.54	57 46.0	27 4.75	- 2.95	+0 14.84	+ 8.31	-0.52	-11.00	7 58 10.22	49 55 37.0
7 58 9.8	9.5	59 9.46	59 19.2	42 35.55	- 7.89	+0 14.88	+10.21	-0.56	-11.60	7 59 37.39	51 40 2.2
7 58 9.8	8.4	59 14.50	58 44.2	42 35.55	+24.65	+0 14.88	+10.01	-0.56	-11.60	7 59 42.43	51 40 34.5
8 1 51.1	7.5	2 50.82	2 44.8	0 6.40	+ 5.02	+0 14.85	+ 8.96	-0.57	-11.00	8 3 18.47	50 22 43.0
8 5 22.0	8.8	6 22.82	5 59.1	6 5.40	+19.87	+0 14.84	+ 8.58	-0.60	-10.90	8 6 50.39	50 16 57.6
8 8 28.2	8.2	9 28.00	9 6.5	33 2.70	+18.20	+0 14.84	+ 8.14	-0.62	-10.60	8 9 55.44	49 49 57.8
8 12 16.2	8.0	13 16.52	12 49.8	2 8.40	+21.88	+0 14.87	+ 9.69	-0.68	-11.00	8 13 44.11	51 20 56.0
8 14 52.4	9.3	15 53.94	15 33.3	52 3.80	+16.82	+0 14.87	+ 9.95	-0.71	-10.90	8 16 21.49	51 30 55.4
8 17 5.3	...	18 5.26	17 37.7	4 11.26	+22.64	+0 14.86	+ 9.46	-0.73	-10.80	8 18 32.72	51 18 53.3

ZONE 168, MARCH 27, 1872.

7 29 8.9	8.8	30 11.94	30 2.2	56 5.40	+ 7.93	+0 15.76	+ 9.78	-0.14	-12.50	7 30 41.42	51 26 50.4
7 31 23.9	8.8	32 27.82	32 2.6	49 13.65	+20.56	+0 15.76	+ 9.64	-0.16	-12.50	7 32 57.28	51 33 54.1
7 33 1.8	9.3	34 4.80	33 57.4	58 43.85	+ 6.06	+0 15.76	+ 9.64	-0.17	-12.40	7 34 34.21	51 24 9.1
7 36 53.2	9.4	37 57.74	37 44.9	52 3.60	+10.68	+0 15.74	+ 8.68	-0.20	-12.10	7 38 26.92	50 30 52.4
7 40 17.5	8.7	41 18.32	40 51.6	23 57.45	+22.53	+0 15.74	+ 7.88	-0.23	-12.00	7 41 47.36	49 59 8.9
7 41 37.5	8.9	42 39.26	42 29.7	53 40.90	+ 8.02	+0 15.75	+ 8.61	-0.24	-12.10	7 43 8.37	50 29 11.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
7 43 55.6	8.8	44 56.90	44 31.0	16 39.10	+21.79	+0 15.74	+ 8.13	-0.26	-11.90	7 45 25.90	50 6 25.9
7 47 30.3	9.3	48 30.90	48 44.0	47 10.55	-10.92	+0 15.75	+ 8.82	-0.30	-12.00	7 48 59.90	50 35 21.6
7 51 15.9	9.2	52 20.34	51 44.6	44 30.95	+29.08	+0 15.77	+ 9.60	-0.35	-12.30	7 52 49.44	51 38 40.8
7 53 50.9	8.6	54 52.86	54 25.6	35 27.20	+22.64	+0 15.76	+ 8.96	-0.36	-12.00	7 55 21.78	50 47 37.2
7 58 9.8	9.4	59 8.40	59 26.7	42 25.70	-14.89	+0 15.78	+ 9.97	-0.41	-12.20	7 59 37.38	51 40 1.0
7 58 9.8	8.3	59 13.58	58 49.3	42 25.70	+19.77	+0 15.78	+ 9.92	-0.41	-12.20	7 59 42.56	51 40 35.6
8 1 51.1	7.9	2 49.82	2 19.2	0 21.00	+25.61	+0 15.75	+ 8.44	-0.43	-11.70	8 3 18.51	50 22 44.5
8 5 22.0	8.9	6 21.82	5 53.2	6 5.00	+23.98	+0 15.75	+ 8.30	-0.46	-11.50	8 6 50.44	50 16 57.9
8 8 28.2	8.4	9 27.06	9 3.8	32 58.85	+19.72	+0 15.75	+ 8.00	-0.48	-11.30	8 9 55.55	49 49 59.0
8 12 16.2	8.5	13 15.54	12 47.8	2 4.45	+22.70	+0 15.78	+ 9.48	-0.54	-11.70	8 13 44.18	51 20 56.7
8 14 52.4	9.0	15 52.96	15 22.4	52 6.55	+24.99	+0 15.78	+ 9.61	-0.57	-11.70	8 16 21.56	51 30 56.4
8 17 5.3	8.9	18 4.22	17 55.3	3 51.20	+ 7.30	+0 15.77	+ 9.54	-0.58	-11.60	8 18 32.74	51 18 53.6
ZONE 169, MARCH 28, 1872.											
8 9 10.7	9.2	10 12.77	9 54.2	42 24.85	+15.13	+0 15.69	+ 9.96	-0.49	-12.00	8 10 41.46	51 40 29.7
8 14 16.2	9.0	15 17.72	14 53.4	39 27.80	+21.85	+0 15.67	+ 8.75	-0.52	-11.60	8 15 46.15	50 43 31.5
8 16 27.1	...	17 25.90	16 59.8	24 39.50	+22.02	+0 15.66	+ 8.01	-0.53	-11.30	8 17 54.18	49 58 19.1
8 18 59.0	9.0	19 59.80	19 47.4	37 43.55	+10.07	+0 15.70	+10.11	-0.59	-11.80	8 20 28.29	51 45 4.2
8 21 7.5	8.3	22 6.24	21 45.8	15 19.65	+16.80	+0 15.68	+ 9.36	-0.59	-11.50	8 22 34.60	51 7 33.8
8 22 52.6	8.9	23 55.30	23 48.6	56 20.20	+ 5.48	+0 15.69	+ 9.77	-0.62	-11.50	8 24 23.65	51 26 22.0
8 24 38.1	8.5	25 40.18	25 29.5	34 20.20	+ 8.87	+0 15.68	+ 9.01	-0.62	-11.30	8 26 8.41	50 48 24.5
8 28 15.3	8.7	29 14.10	28 44.3	17 4.25	+24.56	+0 15.68	+ 9.17	-0.66	-11.00	8 29 42.28	51 5 55.8
8 30 2.8	9.2	31 2.18	30 54.9	6 13.50	+ 6.12	+0 15.66	+ 8.48	-0.68	-11.00	8 31 30.19	50 16 27.1
8 32 40.1	8.5	33 38.04	33 7.4	56 52.55	+25.58	+0 15.66	+ 8.40	-0.68	-10.90	8 34 6.04	50 26 7.0
8 35 57.5	8.9	36 54.74	36 27.3	37 14.25	+22.25	+0 15.70	+ 9.96	-0.74	-11.30	8 37 22.85	51 45 42.4
ZONE 170, APRIL 4, 1872.											
8 9 34.2	8.7	10 36.06	10 9.2	40 24.35	+21.87	+0 14.82	+ 9.88	-0.31	-12.70	8 11 4.06	51 42 36.1
8 14 16.2	9.2	15 18.44	14 55.3	39 24.65	+19.19	+0 14.81	+ 8.84	-0.35	-12.30	8 15 46.18	50 43 31.5
8 16 27.1	8.2	17 26.60	17 1.2	24 38.30	+21.43	+0 14.80	+ 7.98	-0.36	-12.00	8 17 54.19	49 58 19.0
8 18 59.0	9.0	19 59.98	19 46.0	37 43.62	+11.37	+0 15.70	+10.09	-0.59	-11.80	8 20 28.47	51 45 5.4
8 21 21.0	7.8	22 20.18	21 53.7	20 15.65	+21.86	+0 14.81	+ 9.14	-0.42	-12.30	8 22 47.82	51 2 41.9
8 22 52.6	8.8	23 56.10	23 50.1	56 18.40	+ 4.91	+0 14.81	+ 9.74	-0.44	-12.30	8 24 23.75	51 26 22.5
8 24 28.9	8.4	25 28.02	25 42.9	28 31.60	-12.33	+0 14.81	+ 9.12	-0.44	-12.10	8 25 55.57	50 53 51.3
8 26 17.4	7.5	27 14.74	27 6.1	34 21.30	+ 7.28	+0 14.80	+ 8.13	-0.44	-11.70	8 27 42.11	49 48 20.2
8 28 15.3	8.8	29 14.80	29 5.0	16 47.45	+ 8.06	+0 14.81	+ 9.36	-0.48	-11.80	8 29 42.29	51 5 55.6
8 32 40.1	8.5	33 38.70	33 20.2	56 42.35	+15.46	+0 14.80	+ 8.55	-0.51	-11.80	8 34 6.01	50 26 6.4
8 35 57.5	8.8	36 55.52	36 34.8	37 8.20	+16.81	+0 14.82	+10.02	-0.57	-12.20	8 37 22.92	51 45 42.3
8 38 34.4	9.1	39 33.42	39 7.7	48 55.65	+20.96	+0 14.81	+ 9.71	-0.59	-12.00	8 40 0.73	51 33 58.3
ZONE 171, APRIL 10, 1872.											
8 47 31.6	8.6	48 33.52	48 9.1	44 58.30	+19.87	+0 13.34	+ 9.71	-0.52	-12.40	8 48 59.31	51 37 53.4
8 49 3.7	8.5	50 4.46	50 8.4	43 6.75	- 3.17	+0 13.35	+ 9.85	-0.54	-12.40	8 50 30.22	51 39 21.5
8 49 41.8	8.8	50 43.40	50 58.0	43 6.75	-11.88	+0 13.35	+ 9.80	-0.55	-12.40	8 51 9.15	51 39 12.8
8 52 57.2	9.3	53 58.62	53 43.6	28 35.60	+12.14	+0 13.35	+10.06	-0.58	-12.40	8 54 24.31	51 54 7.6
8 55 19.2	...	56 18.56	56 16.7	35 24.20	+ 1.58	+0 13.34	+ 9.97	-0.60	-12.30	8 56 44.04	50 47 8.0
8 55 27.2	...	56 26.74	56 5.4	35 24.20	+17.67	+0 13.34	+ 9.85	-0.60	-12.30	8 56 52.22	50 47 24.0

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
8 58 45.3	8.5	59 43.84	59 30.6	4 40.35	+10.83	+0 13.34	+ 9.93	-0.63	-12.00	9 0 9.31	51 18 0.8
9 0 54.3	9.0	1 55.06	1 38.8	33 56.75	+13.22	+0 13.35	+ 9.97	-0.65	-12.10	9 2 20.55	51 48 46.3
9 3 25.4	9.0	4 24.98	3 55.6	24 34.90	+24.29	+0 13.33	+ 8.91	-0.66	-11.80	9 4 50.17	49 58 18.0
9 6 2.1	8.6	7 0.70	6 39.0	10 55.35	+17.84	+0 13.34	+ 9.19	-0.69	-11.70	9 7 25.98	51 11 51.0
9 10 38.4	6.8	11 37.34	11 7.5	35 38.65	+24.18	+0 13.35	+ 9.74	-0.74	-11.80	9 12 2.58	51 47 13.7
9 14 43.3	8.4	15 41.74	15 15.4	55 56.45	+21.51	+0 13.34	+ 9.40	-0.76	-11.60	9 16 6.84	51 26 52.4
9 21 32.4	9.2	22 30.18	21 58.1	35 6.95	+26.62	+0 13.33	+ 8.63	-0.82	-11.10	9 22 55.02	50 47 45.6
9 23 22.3	6.8	24 17.94	24 10.9	23 12.70	+ 5.78	+0 13.32	+ 8.01	-0.81	-10.80	9 24 42.66	49 59 18.3
9 25 30.6	9.3	26 27.24	26 17.4	49 9.40	+ 8.17	+0 13.32	+ 8.61	-0.84	-10.90	9 26 51.96	50 33 24.2
9 27 31.9	9.4	28 29.92	28 12.7	13 29.35	+14.46	+0 13.32	+ 8.12	-0.85	-10.70	9 28 54.55	50 9 9.9
9 28 57.7	...	29 54.32	29 45.4	33 55.25	+ 7.38	+0 13.33	+ 8.92	-0.88	-10.80	9 30 18.98	50 48 37.4
9 31 15.9	9.3	32 12.18	31 47.2	33 9.70	+21.16	+0 13.32	+ 7.86	-0.88	-10.50	9 32 36.69	49 49 35.6
9 34 43.4	9.1	35 39.84	35 12.5	22 59.60	+23.03	+0 13.32	+ 7.86	-0.91	-10.40	9 36 4.27	49 59 47.1
9 39 11.7	8.9	40 8.32	39 32.5	55 39.70	+29.27	+0 13.33	+ 9.25	-0.99	-10.60	9 40 32.76	51 27 13.8
9 41 27.7	8.8	42 24.89	42 4.0	46 18.50	+17.03	+0 13.33	+ 9.68	-1.01	-10.60	9 42 49.28	51 36 22.8
9 43 41.3	6.8	44 37.62	44 28.1	10 4.40	+ 7.81	+0 13.33	+ 9.29	-1.02	-10.40	9 45 1.92	51 12 27.2
9 45 26.9	9.7	46 23.04	46 41.0	28 0.60	-14.56	+0 13.34	+10.06	-1.05	-10.50	9 46 47.36	51 54 9.0
9 49 25.0	9.0	50 21.48	50 4.0	7 41.75	+14.37	+0 13.32	+ 9.34	-1.07	-10.20	9 50 45.62	51 14 55.8
9 50 51.3	8.7	51 46.44	51 29.7	9 48.40	+13.73	+0 13.32	+ 9.33	-1.08	-10.10	9 52 10.54	51 12 48.4
9 52 26.3	7.7	53 19.26	53 32.9	17 22.25	-11.21	+0 13.32	+ 9.19	-1.09	-10.00	9 53 43.31	51 4 49.4
9 55 50.5	...	56 43.78	56 22.9	13 15.70	+17.20	+0 13.32	+ 9.20	-1.12	- 9.80	9 57 7.74	51 9 24.1
ZONE 172, APRIL 11, 1872.											
8 47 31.6	8.6	48 33.90	48 6.1	45 7.20	+22.64	+0 12.98	+ 9.77	-0.50	-12.50	8 48 59.35	51 37 52.9
8 49 3.7	8.5	50 4.72	50 4.0	43 17.10	+ 0.57	+0 12.98	+10.07	-0.52	-12.50	8 50 30.12	51 39 21.0
8 49 41.8	9.1	50 43.74	50 54.0	43 17.10	- 8.38	+0 12.98	+10.04	-0.52	-12.50	8 51 9.14	51 39 11.9
8 52 57.2	9.4	53 58.85	53 31.4	28 50.00	+22.18	+0 12.98	+ 9.87	-0.56	-12.50	8 54 24.19	51 54 8.7
8 55 19.2	8.3	56 18.98	56 21.8	35 26.15	- 2.32	+0 12.97	+10.15	-0.57	-12.40	8 56 44.12	50 47 8.0
8 55 27.2	8.3	56 27.08	56 11.0	35 26.15	+13.35	+0 12.97	+10.09	-0.58	-12.40	8 56 52.22	50 47 23.6
8 56 25.6	...	57 25.38	57 28.0	15 3.30	- 2.14	+0 12.97	+ 9.38	-0.60	-12.00	8 57 50.52	51 7 30.5
8 58 45.3	8.4	59 44.10	59 28.8	4 47.35	+12.55	+0 12.97	+ 9.53	-0.60	-12.10	9 0 9.23	51 18 0.7
9 0 54.3	9.3	1 55.40	1 28.9	34 12.20	+21.50	+0 12.97	+10.07	-0.63	-12.20	9 2 20.53	51 48 44.9
9 3 25.4	9.2	4 25.50	4 0.0	24 38.05	+21.07	+0 12.96	+ 9.15	-0.64	-11.90	9 4 50.34	49 58 17.5
9 6 2.1	8.6	7 0.98	6 37.8	11 2.85	+19.08	+0 12.97	+ 9.35	-0.66	-11.80	9 7 25.92	51 11 50.5
9 10 38.4	6.4	11 37.58	11 47.0	35 12.55	- 7.63	+0 12.96	+10.13	-0.72	-11.90	9 12 2.45	51 47 14.0
9 14 43.3	8.4	15 42.04	15 17.6	56 1.15	+19.96	+0 12.96	+ 9.60	-0.75	-11.70	9 16 6.77	51 26 52.0
9 19 5.7	9.0	20 0.28	19 36.2	46 47.05	+20.07	+0 12.95	+ 8.73	-0.77	-11.20	9 20 24.81	50 36 5.0
9 21 32.4	9.2	22 30.56	22 7.8	35 6.10	+18.91	+0 12.94	+ 8.92	-0.79	-11.20	9 22 55.04	50 47 44.6
9 23 22.3	6.9	24 18.28	23 53.3	23 34.45	+20.65	+0 12.94	+ 8.04	-0.79	-10.90	9 24 42.64	49 59 17.2
9 25 30.6	9.1	26 27.70	26 4.3	49 27.40	+19.51	+0 12.94	+ 8.82	-0.82	-11.00	9 26 52.06	50 33 23.4
9 27 31.9	9.2	28 30.36	28 7.2	13 38.95	+19.50	+0 12.94	+ 8.26	-0.83	-10.80	9 28 54.63	50 9 11.1
9 31 15.9	9.2	32 12.62	31 42.7	33 17.95	+25.31	+0 12.94	+ 7.97	-0.86	-10.60	9 32 36.77	49 49 37.2
9 34 43.4	8.8	35 40.22	35 29.7	22 51.65	+ 8.86	+0 12.93	+ 8.23	-0.89	-10.50	9 36 4.28	49 59 46.9
9 39 11.7	9.1	40 8.76	39 41.7	55 39.45	+22.15	+0 12.94	+ 9.57	-0.97	-10.80	9 40 32.83	51 27 12.8
9 41 27.7	8.9	42 25.26	42 1.6	46 26.95	+19.31	+0 12.94	+ 9.83	-0.99	-10.70	9 42 49.28	51 36 22.4
9 43 41.3	6.7	44 38.00	44 12.0	10 23.22	+21.37	+0 12.94	+ 9.31	-1.00	-10.50	9 45 1.93	51 12 27.6
9 45 26.9	9.6	46 23.70	46 3.5	28 35.80	+16.35	+0 12.94	+10.25	-1.03	-10.60	9 46 47.64	51 54 10.6
9 49 25.0	9.0	50 21.96	49 58.0	7 55.15	+19.71	+0 12.93	+ 9.48	-1.05	-10.30	9 50 45.73	51 14 53.6
9 50 51.3	8.6	51 46.86	51 39.2	9 47.95	+ 6.33	+0 12.93	+ 9.60	-1.06	-10.20	9 52 10.59	51 12 47.4
9 52 26.3	8.3	53 19.72	52 54.2	18 2.45	+21.02	+0 12.93	+ 9.28	-1.07	-10.10	9 53 43.40	51 4 47.2

ZONE 173, APRIL 30, 1872.

R. A. 1855.o. According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.o.	Mean Dec. 1875.o.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
10 35 51.2	8.1	36 43.36	36 18.6	17 2.15	+20.87	+0 8.83	+ 8.14	-1.00	-10.90	10 37 2.10	50 5 43.7
10 36 56.2	8.6	37 49.44	37 40.8	14 25.35	+ 7.23	+0 8.83	+ 8.44	-1.03	-10.90	10 38 8.14	50 8 7.0
10 39 16.6	10.0	40 11.26	39 56.0	47 12.55	+12.74	+0 8.82	+ 8.83	-1.05	-10.80	10 40 29.91	50 35 25.6
10 42 36.8	9.0	43 32.28	43 14.7	17 39.50	+14.82	+0 8.82	+ 8.25	-1.06	-10.60	10 43 50.82	50 5 0.1
10 44 57.8	8.2	45 49.66	45 23.7	29 4.60	+21.98	+0 8.82	+ 8.12	-1.07	-10.40	10 46 8.14	49 53 42.0
10 50 29.8	9.1	51 24.14	50 54.5	18 51.35	+24.92	+0 8.82	+ 8.11	-1.13	-10.20	10 51 42.45	50 3 58.0
10 52 30.1	9.3	53 23.97	52 52.3	9 2.65	+25.77	+0 8.82	+ 8.32	-1.14	-10.20	10 53 42.24	50 13 47.6
10 53 13.9	8.5	54 5.66	53 52.7	5 46.80	+10.90	+0 8.82	+ 8.42	-1.15	-10.20	10 54 23.91	50 16 48.6
10 57 56.8	9.1	58 48.94	58 19.8	36 23.90	+24.14	+0 8.82	+ 8.89	-1.23	-10.10	10 59 7.04	50 46 25.0
10 59 18.8	9.5	0 11.36	59 49.3	10 11.45	+18.16	+0 8.82	+ 9.31	-1.23	-10.10	11 0 29.45	51 12 31.8
11 2 19.5	8.6	3 10.98	2 49.0	19 28.00	+18.52	+0 8.82	+ 8.27	-1.22	- 9.70	11 3 28.97	50 3 14.7
11 3 50.8	8.5	4 41.66	4 16.2	35 56.15	+20.70	+0 8.83	+ 9.93	-1.25	-10.10	11 4 59.67	51 46 49.9
11 5 33.8	7.7	6 23.40	5 59.5	50 36.15	+19.93	+0 8.82	+ 8.62	-1.26	- 9.70	11 6 41.30	50 32 8.2
11 8 30.5	6.0	9 20.96	8 56.3	13 15.10	+20.76	+0 8.82	+ 8.29	-1.27	- 9.50	11 9 38.78	50 9 29.7
11 9 22.6	9.1	10 13.98	10 7.0	7 36.90	+ 5.87	+0 8.82	+ 8.50	-1.28	- 9.40	11 10 31.77	50 14 53.3
11 11 24.7	9.8	12 14.76	11 54.1	44 17.40	+17.14	+0 8.82	+ 8.94	-1.31	- 9.40	11 12 32.49	50 38 24.4
11 13 45.1	9.2	14 34.80	14 10.6	1 24.70	+20.26	+0 8.82	+ 8.43	-1.32	- 9.30	11 14 52.46	50 21 19.7
11 16 1.6	8.7	16 51.86	16 27.3	19 3.25	+20.72	+0 8.82	+ 8.24	-1.33	- 9.10	11 17 9.46	50 3 41.5
11 17 13.7	8.3	18 3.52	17 40.4	18 56.85	+19.46	+0 8.82	+ 8.27	-1.33	- 9.00	11 18 21.09	50 3 46.7
11 21 12.4	10.0	22 2.20	21 40.5	23 19.50	+18.30	+0 8.82	+ 8.17	-1.36	- 8.80	11 22 19.66	49 59 22.8
11 24 55.5	8.0	25 42.80	25 18.6	11 32.05	+20.33	+0 8.82	+ 8.27	-1.39	- 8.70	11 26 0.16	50 11 12.3
11 25 49.6	8.8	26 38.30	26 29.0	51 15.10	+ 7.76	+0 8.82	+ 8.72	-1.41	- 8.70	11 26 55.63	50 31 17.1
11 27 44.9	8.8	28 34.06	28 7.4	59 6.75	+22.33	+0 8.82	+ 8.56	-1.42	- 8.60	11 28 51.33	50 23 39.9
11 30 1.9	5.8	30 49.54	30 24.9	4 5.55	+20.18	+0 8.82	+ 9.61	-1.47	- 8.70	11 31 6.74	51 18 39.8
11 36 0.9	9.1	36 48.74	36 26.4	37 39.75	+18.51	+0 8.81	+ 9.00	-1.49	- 8.20	11 37 5.77	50 45 3.7
11 36 56.0	9.2	37 44.38	37 28.1	44 32.45	+13.56	+0 8.81	+ 9.04	-1.50	- 8.10	11 38 1.38	50 38 6.2
11 38 25.9	7.8	39 12.76	38 40.4	7 24.00	+26.60	+0 8.81	+ 9.37	-1.53	- 8.20	11 39 29.71	51 15 27.8

ZONE 174, MAY 20, 1872.

12 18 34.8	8.5	19 19.26	18 54.6	47 11.50	+20.57	+0 6.16	+ 8.38	-1.44	- 9.50	12 19 32.78	50 34 50.1
12 21 42.0	6.6	22 24.68	21 58.6	2 26.15	+21.86	+0 6.16	+ 8.09	-1.45	- 9.30	12 22 38.13	50 19 36.7
12 36 16.0	9.0	36 59.04	36 49.5	26 31.00	+ 8.02	+0 6.16	+ 7.82	-1.55	- 8.50	12 37 12.10	49 55 19.0
12 39 17.9	9.2	40 0.98	...	...	...	+0 6.16	...	-1.59	- ...	12 40 13.92	...
12 39 17.9	9.0	40 1.20	39 31.7	51 42.15	+24.62	+0 6.16	+ 8.16	-1.59	- 8.50	12 40 14.14	50 30 24.9
12 40 39.3	9.1	41 21.22	41 11.8	32 22.10	+ 7.79	+0 6.16	+ 8.80	-1.60	- 8.40	12 41 34.11	50 49 29.0
12 41 11.2	6.5	41 52.16	42 3.3	31 10.35	- 9.19	+0 6.16	+ 8.73	-1.61	- 8.50	12 42 5.03	50 50 23.6
12 44 41.4	8.0	45 22.92	44 55.8	25 6.00	+22.88	+0 6.16	+ 7.56	-1.61	- 8.10	12 45 35.74	49 56 59.4
12 45 52.5	9.2	46 34.40	46 12.8	20 1.65	+18.20	+0 6.16	+ 7.69	-1.62	- 8.00	12 46 47.19	50 1 59.4
12 51 22.0	9.2	52 5.00	51 41.4	53 13.60	+19.70	+0 6.16	+ 8.34	-1.68	- 7.90	12 52 17.60	50 28 50.0
12 54 18.0	9.0	54 57.56	54 37.9	4 11.05	+16.51	+0 6.16	+ 8.27	-1.68	- 7.70	12 55 10.10	50 17 49.6
12 57 54.2	8.2	58 35.36	58 19.8	37 27.60	+12.95	+0 6.16	+ 8.70	-1.73	- 7.50	12 58 47.76	50 44 30.4
12 59 15.9	9.0	59 57.76	59 33.3	13 52.45	+20.60	+0 6.16	+ 8.06	-1.71	- 7.30	13 0 10.18	50 8 12.9
13 1 18.4	8.9	1 58.32	1 53.0	12 3.10	+ 4.45	+0 6.16	+ 8.09	-1.72	- 7.20	13 2 10.69	50 9 46.3
13 2 41.9	8.3	3 21.18	2 53.7	14 58.30	+23.13	+0 6.16	+ 8.06	-1.73	- 7.20	13 3 33.51	50 7 9.9
13 4 17.9	9.6	4 56.24	4 24.9	12 32.30	+26.31	+0 6.16	+ 7.88	-1.74	- 7.10	13 5 8.53	50 9 39.1
13 9 19.8	8.5	9 59.48	9 35.7	52 28.30	+19.44	+0 6.16	+ 9.38	-1.82	- 7.00	13 10 11.52	51 29 38.2
13 10 42.8	8.7	11 22.52	10 54.4	1 18.15	+23.52	+0 6.16	+ 8.03	-1.78	- 6.80	13 11 34.63	50 20 51.4
13 12 5.2	4.8	12 43.36	12 20.0	1 40.35	+19.60	+0 6.16	+ 8.12	-1.79	- 6.70	13 12 55.43	50 20 25.6
13 13 41.9	8.2	14 19.97	13 55.0	16 40.15	+20.93	+0 6.16	+ 8.89	-1.83	- 6.60	13 14 32.00	51 5 28.0
13 14 16.7	8.7	14 55.76	14 34.0	16 39.35	+17.96	+0 6.16	+ 8.93	-1.83	- 6.70	13 15 7.71	51 5 25.9

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
13 17 23.5	8.6	18 2.40	17 39.4	39 0.50	+18.69	+0 6.16	+ 9.71	-1.87	- 6.70	13 18 14.21	51 43 6.6
13 20 11.3	9.5	20 49.52	20 19.1	49 47.05	+24.81	+0 6.16	+ 9.49	-1.89	- 6.40	13 21 1.26	51 32 26.5
13 22 15.9	7.3	22 52.38	22 30.3	8 4.85	+18.15	+0 6.16	+ 9.17	-1.89	- 6.30	13 23 4.10	51 14 2.0
ZONE 175, JUNE 3, 1872.											
13 22 14.4	9.0	22 47.46	22 28.2	21 25.90	+16.18	+0 10.10	+ 7.96	-1.62	- 8.70	13 23 3.46	50 0 16.7
13 25 0.4	9.1	25 35.42	25 10.6	19 45.35	+20.78	+0 10.10	+ 8.22	-1.64	- 8.60	13 25 51.35	50 2 2.5
13 27 11.3	9.0	27 44.46	27 16.2	13 26.65	+23.66	+0 10.10	+ 8.17	-1.66	- 8.50	13 28 0.32	50 8 24.4
13 29 44.0	9.0	30 17.60	29 50.6	4 2.50	+22.50	+0 10.10	+ 8.40	-1.68	- 8.40	13 30 33.37	50 17 47.9
13 32 13.9	9.8	32 47.38	32 42.5	41 31.25	+ 4.05	+0 10.10	+ 8.86	-1.71	- 8.40	13 33 3.05	50 40 1.4
13 37 12.3	7.3	37 44.46	37 18.7	42 22.25	+21.34	+0 10.10	+ 8.76	-1.74	- 8.10	13 38 0.01	50 39 28.4
13 49 47.5	8.8	50 19.20	50 5.4	42 25.70	+11.41	+0 10.10	+ 8.89	-1.82	- 7.50	13 50 34.43	50 39 17.2
13 52 4.9	8.8	52 35.48	52 3.7	3 38.65	+26.50	+0 10.10	+ 8.30	-1.82	- 7.30	13 52 50.69	50 18 19.3
13 55 48.7	8.3	56 18.26	55 48.9	37 20.15	+24.27	+0 10.10	+ 8.81	-1.85	- 7.20	13 56 33.33	50 44 36.6
14 0 52.6	9.7	1 23.01	0 48.9	15 57.00	+27.93	+0 10.10	+ 8.27	-1.90	- 7.00	14 1 37.91	51 6 3.7
14 3 29.4	8.8	3 59.80	3 34.3	23 54.10	+21.40	+0 10.10	+ 8.22	-1.87	- 6.60	14 4 14.79	49 58 0.8
14 11 7.8	8.1	11 36.60	11 10.7	15 33.10	+21.21	+0 10.10	+ 9.05	-1.95	- 6.40	14 11 51.26	51 6 23.7
14 12 12.3	5.7	12 40.02	12 12.5	28 48.95	+22.15	+0 10.09	+10.14	-1.99	- 6.50	14 12 54.54	51 53 9.9
14 14 19.8	9.1	14 48.20	14 21.5	29 22.45	+21.50	+0 10.09	+10.19	-2.00	- 6.40	14 15 2.67	51 52 36.3
14 18 44.6	8.8	19 14.46	18 47.3	55 53.95	+22.60	+0 10.10	+ 8.65	-1.97	- 5.90	14 19 29.03	50 26 5.5
ZONE 176, JUNE 9, 1872.											
13 22 14.4	8.8	22 44.54	22 25.3	21 26.70	+16.10	+0 12.83	+ 7.79	-1.52	- 9.60	13 23 3.37	50 0 15.2
13 23 12.5	9.0	23 43.92	24 4.1	16 28.35	-16.91	+0 12.83	+ 7.86	-1.53	- 9.60	13 24 2.72	50 4 40.7
13 25 0.4	9.1	25 32.48	25 10.7	19 40.40	+18.27	+0 12.83	+ 8.16	-1.54	- 9.50	13 25 51.24	50 2 4.4
13 27 11.3	9.1	27 41.52	27 15.8	13 21.95	+21.49	+0 12.83	+ 8.06	-1.56	- 9.50	13 28 0.21	50 8 26.2
13 28 19.4	8.9	28 49.34	29 5.4	30 58.45	-13.26	+0 12.83	+ 8.71	-1.58	- 9.60	13 29 7.94	50 50 15.6
13 29 44.0	9.0	30 14.66	30 29.0	3 29.40	-11.91	+0 12.83	+ 8.37	-1.58	- 9.40	13 30 33.26	50 17 46.0
13 37 12.3	7.8	37 41.52	37 13.7	42 22.50	+22.99	+0 12.83	+ 8.49	-1.64	- 9.20	13 37 59.90	50 39 28.9
13 38 22.4	9.0	38 54.52	38 28.3	32 38.55	+21.13	+0 12.82	+ 9.77	-1.68	- 9.50	13 39 12.74	51 49 12.1
13 49 47.5	8.7	50 16.32	49 50.5	42 33.45	+21.34	+0 12.83	+ 8.53	-1.72	- 8.60	13 50 34.38	50 39 18.4
13 52 4.9	8.6	52 32.54	52 6.6	3 32.50	+21.58	+0 12.83	+ 8.25	-1.72	- 8.40	13 52 50.58	50 18 19.8
13 57 37.5	6.2	58 2.80	57 36.3	47 28.10	+21.49	+0 12.82	+ 9.22	-1.80	- 8.38	13 58 20.54	51 34 25.8
14 0 52.6	9.9	1 20.20	0 53.6	15 52.05	+21.79	+0 12.83	+ 8.80	-1.81	- 8.10	14 1 37.92	51 6 2.4
14 3 29.4	8.7	3 56.98	3 32.8	23 52.10	+20.31	+0 12.83	+ 7.99	-1.79	- 7.80	14 4 14.78	49 58 0.7
14 5 13.4	8.5	5 39.42	5 14.3	19 9.15	+21.03	+0 12.83	+ 8.07	-1.80	- 7.70	14 5 57.17	50 2 44.8
14 7 36.8	8.3	8 3.74	7 35.2	24 51.35	+22.92	+0 12.82	+10.13	-1.87	- 8.00	14 8 21.28	50 57 6.6
14 8 26.5	8.2	8 52.87	9 1.1	28 35.90	- 6.60	+0 12.82	+10.09	-1.88	- 7.90	14 9 10.28	51 52 52.7
14 10 11.3	8.1	10 37.92	11 2.3	19 52.65	-20.02	+0 12.83	+ 9.25	-1.86	- 7.70	14 10 55.43	51 1 22.1
14 10 11.3	8.6	10 38.30	11 8.7	19 52.65	-24.94	+0 12.83	+ 9.16	-1.86	- 7.70	14 10 55.81	51 1 17.1
14 12 12.3	6.2	12 37.16	12 17.2	28 41.60	+16.11	+0 12.83	+10.03	-1.90	- 7.70	14 12 54.51	51 53 10.4
14 14 19.8	8.8	14 45.28	14 16.4	29 22.60	+23.28	+0 12.82	+ 9.97	-1.91	- 7.60	14 15 2.57	51 52 36.9
14 18 44.6	8.7	19 11.54	19 2.8	55 36.25	+ 7.23	+0 12.83	+ 8.23	-1.89	- 7.10	14 19 28.92	50 26 6.6
14 20 8.5	9.1	20 33.46	20 26.7	41 25.55	+ 5.50	+0 12.82	+ 9.64	-1.94	- 7.30	14 20 50.63	51 40 17.0
14 22 34.4	7.6	22 59.20	22 45.4	24 24.75	+11.58	+0 12.83	+ 8.14	-1.89	- 6.80	14 23 16.56	49 57 23.3
14 30 58.4	8.9	31 23.48	30 54.3	55 52.05	+23.75	+0 12.83	+ 9.11	-1.98	- 6.70	14 31 40.46	51 26 10.5
14 38 30.5	9.1	38 54.74	39 6.2	20 45.95	-12.14	+0 12.83	+ 7.80	-1.99	- 6.00	14 39 11.74	50 0 41.3
14 41 4.1	9.6	41 28.13	40 59.2	31 55.10	+23.82	+0 12.83	+ 8.62	-2.01	- 6.10	14 41 44.97	50 50 9.3

ZONE 177, JUNE 11, 1872.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h ms		m s	m s	' "	"	m s	"	s	"	h m s	° "
13 22 47.8	7.7	23 17.48	.....	.....	.....	+0 13.75	.....	-1.51	.....	13 23 37.17	.....
13 24 23.7	9.0	24 54.36	24 28.2	14 28.40	+20.91	+0 13.74	+10.29	-1.55	-10.30	13 25 13.89	52 12 29.1
13 26 47.3	8.5	27 14.88	26 47.6	45 55.05	+21.55	+0 13.74	+10.38	-1.58	-10.30	13 27 34.29	52 41 3.4
13 27 57.4	8.1	28 27.24	28 1.3	51 23.45	+20.96	+0 13.75	+ 9.35	-1.56	-10.00	13 28 46.73	51 35 33.8
13 30 49.0	8.1	31 17.30	30 50.3	31 2.55	+21.73	+0 13.74	+ 9.57	-1.59	-10.00	13 31 36.67	51 55 56.0
13 32 15.5	7.8	32 44.84	32 17.4	51 13.05	+22.21	+0 13.75	+ 9.26	-1.59	- 9.90	13 33 4.22	51 35 45.9
13 34 35.0	7.8	35 2.28	34 34.0	42 20.95	+21.84	+0 13.72	+11.52	-1.68	-10.20	13 35 21.32	53 44 39.9
13 35 29.0	9.0	35 57.52	35 30.6	26 8.95	+20.63	+0 13.72	+11.66	-1.69	-10.20	13 36 16.52	54 0 50.9
13 37 34.0	9.5	38 2.96	37 42.7	14 23.70	+16.60	+0 13.75	+ 9.25	-1.62	- 9.60	13 38 22.23	51 12 30.5
13 38 55.7	9.1	39 24.26	38 54.6	2 5.10	+23.65	+0 13.74	+10.11	-1.66	- 9.80	13 39 43.36	52 24 57.0
13 40 50.4	8.5	41 18.34	40 35.8	49 54.35	+33.68	+0 13.74	+ 9.94	-1.68	- 9.70	13 41 37.37	52 37 17.9
13 45 26.0	8.7	45 52.98	45 21.9	16 12.15	+23.76	+0 13.71	+11.79	-1.77	- 9.80	13 46 11.65	54 10 52.5
13 46 49.0	9.7	47 15.86	46 54.0	40 50.65	+17.29	+0 13.74	+10.46	-1.73	- 9.50	13 47 34.70	52 46 6.6
13 48 3.6	7.6	48 30.62	48 1.9	43 19.75	+22.68	+0 13.74	+10.59	-1.74	- 9.40	13 48 49.43	52 43 43.3
13 50 48.0	9.0	51 14.64	50 53.3	23 51.40	+17.47	+0 13.75	+ 9.04	-1.70	- 9.00	13 51 33.58	51 3 5.6
13 52 11.6	8.0	52 38.50	51 58.8	50 59.50	+31.47	+0 13.74	+10.02	-1.76	- 9.20	13 52 57.22	52 36 12.5
13 52 59.4	9.1	53 26.15	53 20.5	28 16.60	+ 4.50	+0 13.74	+10.06	-1.75	- 9.00	13 53 44.92	51 58 28.7
13 54 4.0	8.6	54 28.68	54 13.4	42 31.55	+11.52	+0 13.70	+12.78	-1.85	- 9.50	13 54 47.03	54 44 23.2
13 55 20.0	8.1	55 44.64	55 2.4	4 37.10	+32.08	+0 13.71	+12.14	-1.85	- 9.40	13 56 3.00	54 22 37.8
13 58 57.2	8.7	59 22.68	59 1.1	23 43.65	+17.33	+0 13.74	+10.07	-1.79	- 8.80	13 59 41.28	52 3 15.5
14 2 15.0	8.5	2 38.82	2 6.8	6 15.55	+24.93	+0 13.72	+10.96	-1.84	- 8.90	14 2 57.16	53 20 52.4
14 5 32.4	7.9	5 58.04	5 26.6	29 30.05	+24.11	+0 13.72	+11.93	-1.90	- 8.80	14 6 16.19	53 57 38.6
14 7 8.7	8.7	7 32.52	7 4.0	37 33.30	+21.43	+0 13.70	+12.73	-1.94	- 8.90	14 7 50.49	54 49 33.6
14 11 8.5	8.5	11 31.36	11 1.3	56 2.10	+23.36	+0 13.73	+11.12	-1.91	- 8.40	14 11 49.44	53 31 6.2
14 12 12.3	6.6	12 36.32	12 5.8	33 58.45	+24.57	+0 13.75	+ 9.83	-1.86	- 8.10	14 12 54.63	51 53 10.2
14 14 19.8	9.2	14 44.46	14 14.4	34 33.35	+24.25	+0 13.75	+ 9.87	-1.88	- 8.00	14 15 2.71	51 52 35.4
14 20 23.1	7.8	20 46.76	20 12.2	18 5.60	+26.45	+0 13.73	+11.91	-2.00	- 8.10	14 21 4.51	54 9 8.2
14 22 15.0	9.8	22 37.32	22 19.8	55 18.20	+13.25	+0 13.73	+12.21	-2.02	- 8.00	14 22 54.96	54 31 43.1
14 24 15.2	8.4	24 37.08	24 11.0	12 51.45	+19.90	+0 13.73	+12.11	-2.02	- 7.90	14 24 54.71	54 14 16.8
14 25 51.1	9.1	26 14.26	25 45.8	27 23.30	+21.86	+0 13.73	+11.80	-2.03	- 7.80	14 26 31.88	53 59 47.0
14 27 33.8	9.1	27 55.36	27 21.7	4 22.95	+27.45	+0 13.76	+ 9.30	-1.94	- 7.20	14 28 13.37	51 22 51.3

ZONE 178, JUNE 19, 1872.

14 31 18.2	9.0	31 40.16	31 31.1	41 17.85	+ 7.02	+0 13.34	+11.71	-1.90	- 9.00	14 31 57.45	53 45 37.2
14 34 16.1	9.1	34 37.58	34 5.8	38 34.40	+24.51	+0 13.34	+11.83	-1.92	- 8.90	14 34 54.80	53 48 38.8
14 38 49.3	8.1	39 9.92	38 37.4	7 49.50	+24.73	+0 13.32	+12.24	-1.97	- 8.70	14 39 26.89	54 19 25.3
14 43 23.6	9.3	43 45.04	43 8.7	42 53.10	+28.01	+0 13.33	+11.58	-1.97	- 8.40	14 44 2.03	53 44 25.4
14 44 10.7	8.8	44 30.70	44 16.6	52 16.45	+10.93	+0 13.33	+11.63	-1.97	- 8.30	14 44 47.70	53 34 45.3
14 46 8.6	9.0	46 28.34	45 58.0	0 1.95	+22.99	+0 13.32	+12.09	-2.02	- 8.40	14 46 45.12	54 27 12.5
14 47 13.5	8.3	47 35.16	47 2.1	11 30.95	+25.23	+0 13.33	+12.01	-2.02	- 8.30	14 47 51.96	54 15 46.0
14 51 3.4	9.5	51 23.96	50 23.8	29 41.70	+46.22	+0 13.33	+12.57	-2.07	- 8.20	14 51 40.68	53 57 57.6
14 52 41.9	9.1	53 0.70	52 30.3	26 21.65	+23.31	+0 13.32	+11.80	-2.04	- 8.00	14 53 17.41	54 0 54.4
14 55 16.6	8.7	55 35.30	55 24.0	5 35.65	+ 8.59	+0 13.31	+12.25	-2.06	- 8.00	14 55 51.89	54 21 26.6
15 1 41.7	9.2	2 0.36	1 31.3	16 25.50	+22.23	+0 13.32	+12.00	-2.09	- 7.60	15 2 16.84	54 10 51.8
15 3 1.1	8.0	3 20.34	2 53.2	13 47.00	+21.17	+0 13.33	+11.32	-2.06	- 7.40	15 3 36.97	53 13 29.0
15 4 19.4	7.8	4 38.10	3 46.9	43 16.05	+39.53	+0 13.32	+11.31	-2.09	- 7.40	15 4 54.60	53 44 18.5
15 11 24.0	8.9	11 41.70	11 7.1	14 39.05	+26.55	+0 13.32	+12.31	-2.15	- 7.10	15 11 57.95	54 12 45.2
15 15 39.4	9.2	15 57.82	15 28.3	15 15.95	+23.06	+0 13.33	+10.85	-2.13	- 6.70	15 16 14.19	53 12 4.6
15 17 23.3	8.5	17 41.06	17 8.9	56 40.00	+24.99	+0 13.31	+11.28	-2.15	- 6.70	15 17 57.31	53 35 43.3
15 18 31.9	8.9	18 51.60	18 19.4	3 2.40	+24.47	+0 13.30	+12.36	-2.19	- 6.80	15 19 7.65	54 24 21.5

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
15 20 38.5	6.8	20 55.60	20 32.6	47 58.40	+17.37	+0 13.30	+12.75	-2.22	- 6.70	15 21 11.54	54 39 19.3
15 23 18.0	8.8	23 35.34	23 7.3	47 15.85	+21.66	+0 13.31	+11.60	-2.18	- 6.40	15 23 51.45	53 40 5.9
15 26 52.7	9.6	27 9.85	27 11.0	1 18.70	- 0.93	+0 13.31	+11.43	-2.19	- 6.20	15 27 25.93	53 25 41.2
15 29 38.3	8.0	29 54.96	29 29.9	57 17.55	+19.49	+0 13.31	+11.48	-2.21	- 6.00	15 30 10.97	53 30 3.6
15 30 38.3	9.1	30 56.20	30 27.8	31 7.40	+22.86	+0 13.35	+ 9.69	-2.15	- 5.80	15 31 12.54	51 56 15.7
15 36 55.1	9.1	37 11.42	36 42.8	8 43.05	+22.82	+0 13.34	+10.36	-2.19	- 5.50	15 37 27.57	52 18 42.3
15 55 57.3	8.5	56 10.52	55 32.4	57 19.75	+29.58	+0 13.30	+11.26	-2.31	- 4.60	15 56 26.08	53 30 18.4
15 58 25.0	6.0	58 38.70	58 4.7	11 45.10	+26.54	+0 13.30	+11.01	-2.32	- 4.50	15 58 54.26	53 15 50.4
15 59 38.2	7.7	59 51.88	59 12.6	54 2.95	+30.48	+0 13.29	+11.51	-2.33	- 4.40	16 0 7.35	53 33 37.3
16 2 44.3	8.4	2 58.12	2 25.4	36 21.45	+25.18	+0 13.29	+11.60	-2.35	- 4.30	16 3 13.48	53 51 14.4
16 4 49.3	8.8	5 1.40	4 26.9	36 10.00	+25.93	+0 13.28	+12.70	-2.40	- 4.20	16 5 16.50	54 51 28.3
16 7 34.8	8.8	7 46.64	7 13.8	48 51.20	+24.77	+0 13.28	+12.82	-2.40	- 4.00	16 8 1.74	54 38 46.9
16 12 25.7	9.0	12 41.08	12 13.8	43 51.45	+20.57	+0 13.48	+12.99	-2.42	- 3.70	16 12 56.09	54 43 44.0
16 15 24.6	9.0	15 37.50	15 8.9	37 35.40	+22.03	+0 13.29	+11.79	-2.39	- 3.50	16 15 52.69	53 50 1.3
16 19 3.1	9.0	19 16.18	18 52.2	37 34.95	+18.49	+0 13.29	+11.86	-2.40	- 3.30	16 19 31.32	53 49 59.3
ZONE 179, JUNE 30, 1872.											
15 15 39.4	8.9	16 6.34	15 34.9	15 17.05	+24.55	+0 4.37	+10.48	-1.93	- 8.90	15 16 13.95	53 12 3.2
15 23 18.0	8.6	23 44.10	23 16.3	47 13.45	+21.50	+0 4.33	+11.25	-1.99	- 8.70	15 23 51.42	53 40 6.3
15 29 38.3	8.2	30 3.76	29 39.0	57 14.30	+19.26	+0 4.33	+11.13	-2.02	- 8.50	15 30 10.98	53 30 4.5
15 31 25.4	6.3	31 50.90	31 32.9	7 0.95	+13.70	+0 4.32	+11.98	-2.06	- 8.40	15 31 57.91	54 20 13.7
15 40 14.8	...	40 39.00	40 27.5	9 22.20	+ 8.97	+0 4.31	+11.32	-2.07	- 7.90	15 40 46.04	53 17 49.4
15 47 22.6	8.7	47 46.04	47 19.8	10 26.60	+20.45	+0 4.30	+10.64	-2.11	- 7.60	15 47 52.94	53 16 57.7
15 47 22.6	7.5	47 46.72	47 22.9	10 26.60	+18.58	+0 4.30	+10.67	-2.11	- 7.60	15 47 53.62	53 16 55.8
15 49 7.4	9.6	49 31.88	49 34.0	45 49.60	- 1.62	+0 4.28	+11.28	-2.13	- 7.60	15 49 38.65	53 41 13.6
15 51 46.5	8.1	52 10.18	51 31.0	3 54.20	+29.79	+0 4.25	+11.99	-2.17	- 7.50	15 52 16.72	54 23 41.8
15 59 38.2	7.9	0 0.74	59 31.9	53 52.55	+22.33	+0 4.26	+11.35	-2.18	- 7.00	16 0 7.33	53 33 37.6
16 2 44.3	8.4	3 7.08	2 36.4	36 18.10	+23.64	+0 4.24	+11.28	-2.20	- 6.90	16 3 13.54	53 51 14.1
16 4 49.3	8.8	5 10.22	4 36.0	36 6.60	+25.70	+0 4.22	+12.19	-2.25	- 6.90	16 5 16.41	54 51 29.1
16 7 34.8	8.8	7 55.50	7 13.5	48 54.55	+31.72	+0 4.22	+12.19	-2.26	- 6.80	16 8 1.68	54 38 47.9
16 12 25.7	8.7	12 49.96	12 23.8	43 47.40	+19.75	+0 4.21	+12.53	-2.28	- 6.50	16 12 56.04	54 43 44.8
16 15 24.6	8.7	15 46.42	15 19.0	37 31.45	+21.11	+0 4.22	+11.46	-2.25	- 6.30	16 15 52.68	53 50 2.0
16 19 3.1	8.6	19 24.94	18 51.9	37 38.95	+25.42	+0 4.21	+11.38	-2.27	- 6.10	16 19 31.13	53 49 59.8
16 23 19.0	8.5	23 44.54	23 32.4	13 37.10	+10.10	+0 4.27	+ 8.14	-2.16	- 5.50	16 23 51.46	50 13 44.7
16 28 19.6	9.8	28 43.98	28 24.5	26 12.70	+16.35	+0 4.26	+ 7.57	-2.18	- 5.20	16 28 50.86	50 1 16.3
16 31 41.3	9.1	32 6.80	31 43.6	13 3.85	+19.36	+0 4.26	+ 7.87	-2.20	- 5.10	16 32 13.61	50 14 29.3
16 36 18.4	9.5	36 43.06	36 18.9	30 5.50	+19.90	+0 4.22	+ 8.35	-2.24	- 4.90	16 36 49.63	50 57 30.1
16 38 38.7	6.5	39 3.04	38 33.4	17 6.90	+24.75	+0 4.24	+ 7.70	-2.22	- 4.80	16 39 9.76	50 10 33.5
16 40 47.6	6.8	41 11.40	40 48.1	21 56.15	+19.51	+0 4.23	+ 7.71	-2.22	- 4.70	16 41 18.11	50 5 39.7
16 42 37.3	9.5	43 1.48	42 42.7	29 54.55	+15.45	+0 4.21	+ 9.05	-2.25	- 4.70	16 43 7.99	50 57 39.0
16 44 56.8	9.1	45 22.22	45 5.3	33 3.55	+13.91	+0 4.20	+ 8.65	-2.26	- 4.50	16 45 28.70	50 54 28.8
16 50 32.3	9.3	50 56.72	50 55.2	46 38.85	+ 1.24	+0 4.20	+ 8.43	-2.27	- 4.30	16 51 3.19	50 40 42.2
16 52 46.9	8.6	53 11.74	52 40.1	16 43.30	+26.41	+0 4.20	+ 7.62	-2.26	- 4.10	16 53 18.29	50 11 2.9
16 54 11.5	9.4	54 36.28	54 53.3	21 47.10	-14.23	+0 4.20	+ 7.75	-2.26	- 4.00	16 54 42.83	50 5 19.1
ZONE 180, JULY 6, 1872.											
15 29 38.3	8.5	30 15.48	30 7.7	57 1.20	+ 6.06	-0 7.58	+11.49	-1.90	- 9.50	15 30 10.91	53 30 3.2
15 32 24.9	9.1	33 1.50	32 37.2	10 14.65	+18.52	-0 7.60	+11.91	-1.94	- 9.50	15 32 56.71	54 17 3.3
15 40 14.8	8.2	40 50.82	40 20.0	9 36.15	+24.03	-0 7.60	+11.40	-1.95	- 9.00	15 40 46.07	53 17 48.9
15 47 22.6	9.0	47 57.74	47 28.6	10 28.05	+22.71	-0 7.60	+10.85	-1.99	- 8.70	15 47 52.86	53 16 57.0

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.			Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.		R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"		s	"	h m s	° ' "
15 47 22.6	7.0	47 58.48	47 30.0	10 28.05	+22.24	-0 7.60	+10.85	-1.99	-	8.70	15 47 53.60	53 16 56.5
15 49 7.4	9.8	49 43.66	49 41.3	45 51.60	+ 1.86	-0 7.62	+11.54	-2.01	-	8.70	15 49 38.65	53 41 13.7
15 51 46.5	8.3	52 21.96	51 51.1	3 47.45	+23.48	-0 7.64	+12.42	-2.05	-	8.70	15 52 16.73	54 23 40.9
15 59 38.2	7.9	0 12.48	59 43.4	53 50.05	+22.56	-0 7.63	+11.62	-2.07	-	8.30	16 0 7.29	53 33 38.7
16 2 44.3	8.5	3 18.88	2 49.6	36 15.85	+22.56	-0 7.64	+11.56	-2.09	-	8.20	16 3 13.57	53 51 13.7
16 4 49.3	9.0	5 21.92	4 44.1	36 8.80	+28.41	-0 7.67	+12.41	-2.14	-	8.20	16 5 16.33	54 51 27.9
16 7 34.8	9.0	8 7.26	7 33.1	48 47.70	+25.83	-0 7.66	+12.62	-2.14	-	8.10	16 8 1.68	54 38 47.4
16 12 25.7	8.8	13 1.76	12 31.3	43 50.35	+22.99	-0 7.68	+12.77	-2.17	-	7.90	16 12 56.06	54 43 43.4
16 15 24.6	8.7	15 58.10	15 29.4	37 29.70	+22.11	-0 7.66	+11.69	-2.15	-	7.70	16 15 52.58	53 50 3.0
16 19 3.1	8.6	19 36.66	19 4.2	37 36.65	+25.03	-0 7.66	+11.65	-2.17	-	7.50	16 19 31.08	53 50 0.0
16 23 19.0	8.8	23 56.26	23 27.2	13 49.10	+24.30	-0 7.59	+ 8.18	-2.08	-	6.90	16 23 51.40	50 13 45.0
16 31 41.3	8.9	32 18.52	31 51.1	13 5.10	+22.87	-0 7.60	+ 8.13	-2.12	-	6.60	16 32 13.55	50 14 29.8
16 36 18.4	9.4	36 54.98	36 15.1	30 15.40	+32.89	-0 7.63	+ 8.24	-2.16	-	6.40	16 36 49.78	50 57 31.0
16 38 38.7	6.1	39 14.64	38 49.0	17 1.90	+21.40	-0 7.61	+ 7.95	-2.14	-	6.30	16 39 9.59	50 10 33.4
16 40 47.6	6.5	41 23.16	40 57.0	21 55.65	+21.94	-0 7.62	+ 7.86	-2.15	-	6.20	16 41 18.09	50 5 40.7
16 42 37.3	9.7	43 13.25	42 51.2	29 55.45	+18.08	-0 7.64	+ 9.20	-2.18	-	6.20	16 43 7.98	50 57 38.8
16 44 56.8	8.9	45 33.96	45 8.0	33 8.80	+21.40	-0 7.64	+ 8.84	-2.18	-	6.10	16 45 28.68	50 54 29.1
16 50 32.3	9.3	51 8.50	50 39.9	46 59.15	+23.65	-0 7.64	+ 8.42	-2.20	-	5.80	16 51 3.20	50 40 42.3
16 52 24.7	6.5	52 59.76	52 33.0	13 32.90	+22.38	-0 7.63	+ 8.19	-2.19	-	5.70	16 52 54.55	50 14 7.6
16 54 11.5	9.2	54 48.10	54 20.5	22 21.60	+23.11	-0 7.63	+ 7.91	-2.19	-	5.60	16 54 42.89	50 5 19.9
17 2 32.5	8.5	3 7.74	2 39.7	15 42.95	+22.40	-0 7.67	+ 9.82	-2.29	-	5.40	17 3 1.99	52 12 2.0
ZONE 181, JULY 7, 1872.												
15 30 38.3	9.0	31 18.10	30 42.3	31 9.65	+28.81	-0 8.84	+ 9.44	-1.84	-	9.40	15 31 12.56	51 56 15.7
15 32 12.5	7.3	32 50.56	32 20.3	24 44.35	+22.67	-0 8.90	+13.21	-1.93	-	9.70	15 32 44.35	55 2 38.6
15 38 58.4	8.9	39 35.70	39 3.7	31 31.00	+24.00	-0 8.90	+12.62	-1.97	-	9.40	15 39 29.37	54 55 54.5
15 42 58.5	8.8	43 38.48	43 10.9	5 33.60	+22.00	-0 8.85	+ 9.89	-1.92	-	9.00	15 43 32.62	52 21 48.4
15 50 52.0	8.8	51 31.84	51 5.3	13 57.10	+22.13	-0 8.83	+ 8.13	-1.91	-	8.40	15 51 26.24	50 13 25.6
15 54 35.3	9.7	55 18.96	55 6.4	50 7.60	+10.43	-0 8.83	+ 8.22	-1.94	-	8.30	15 55 13.23	50 37 4.5
16 0 34.5	9.0	1 13.08	0 39.0	58 28.95	+27.11	-0 8.87	+10.34	-2.02	-	8.30	16 1 6.87	52 29 3.3
16 2 21.0	9.6	2 57.62	2 23.7	1 35.75	+26.98	-0 8.87	+10.01	-2.03	-	8.20	16 2 51.39	52 25 56.5
16 5 15.1	9.1	5 54.54	5 31.3	21 2.75	+19.42	-0 8.84	+ 7.76	-1.98	-	7.80	16 5 48.72	50 6 20.8
16 7 1.7	8.6	7 38.60	7 9.5	59 49.35	+23.14	-0 8.87	+10.59	-2.05	-	8.10	16 7 32.29	52 27 40.8
16 8 51.2	8.9	9 28.26	9 3.2	22 31.85	+20.13	-0 8.87	+ 9.94	-2.05	-	7.90	16 9 22.00	52 4 55.3
16 10 30.0	9.0	11 7.66	10 40.1	10 33.60	+22.04	-0 8.88	+ 9.82	-2.06	-	7.90	16 11 1.32	52 16 55.7
16 12 57.0	8.9	13 34.60	13 9.6	33 7.15	+19.68	-0 8.89	+10.91	-2.09	-	7.90	16 13 28.09	52 54 21.4
16 13 38.5	8.8	14 14.85	14 22.6	46 21.00	- 6.16	-0 8.89	+10.59	-2.09	-	7.80	16 14 8.38	52 40 41.7
16 15 57.7	8.5	16 34.54	16 4.5	31 17.60	+24.14	-0 8.88	+ 9.57	-2.08	-	7.60	16 16 28.19	51 56 15.1
16 17 27.1	8.9	18 5.30	17 38.2	49 59.20	+21.96	-0 8.88	+ 9.12	-2.08	-	7.50	16 17 58.98	51 37 31.4
16 18 33.2	9.6	19 11.20	19 9.2	10 56.60	+ 1.63	-0 8.86	+ 8.92	-2.08	-	7.50	16 19 4.95	51 16 13.7
16 21 9.9	8.0	21 47.76	21 20.8	43 20.25	+22.31	-0 8.87	+ 8.67	-2.07	-	7.30	16 21 41.58	50 44 11.3
16 22 39.9	9.1	23 20.18	22 46.5	46 26.75	+27.27	-0 8.89	+ 9.27	-2.10	-	7.30	16 23 13.78	51 41 10.7
16 25 4.4	7.8	25 41.22	25 6.0	26 8.85	+28.28	-0 8.89	+ 9.55	-2.12	-	7.30	16 25 34.72	52 1 30.4
16 29 8.4	7.0	29 45.42	29 6.0	3 23.05	+32.78	-0 8.86	+ 8.14	-2.09	-	6.90	16 29 39.21	50 24 20.8
16 35 23.0	8.8	36 0.78	35 31.2	9 23.40	+24.16	-0 8.88	+ 9.32	-2.15	-	6.70	16 35 54.29	51 18 14.7
16 37 14.1	9.6	37 51.60	37 13.2	55 14.05	+31.69	-0 8.88	+ 7.84	-2.13	-	6.60	16 37 45.24	50 32 30.5
16 38 37.5	9.4	39 14.54	38 41.9	0 50.80	+26.52	-0 8.89	+ 8.92	-2.15	-	6.60	16 39 7.99	51 26 50.1
16 40 19.5	9.3	40 57.12	40 26.6	37 25.00	+25.14	-0 8.88	+ 8.59	-2.15	-	6.50	16 40 50.67	50 50 14.7
16 52 24.4	9.1	53 2.62	52 38.7	9 15.80	+19.51	-0 8.89	+ 9.41	-2.18	-	6.00	16 52 55.97	51 18 22.6
16 52 59.3	9.1	53 34.14	53 45.3	48 35.75	- 9.07	-0 8.90	+ 9.82	-2.23	-	6.00	16 53 27.37	51 38 34.7
16 52 59.3	8.7	53 39.14	54 4.0	48 35.75	-20.17	-0 8.90	+ 9.68	-2.23	-	6.00	16 53 32.37	51 38 23.4
16 56 47.3	6.5	57 21.38	56 39.2	14 14.40	+32.98	-0 8.94	+11.12	-2.29	-	6.00	16 57 14.20	53 13 40.3

ZONE 182, JULY 9, 1872.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	' "	s	"	h m s	° ' "
15 30 38.3	9.1	31 18.70	30 51.5	31 2.50	+21.89	-0 9.51	+ 9.57	-1.80	- 9.70	15 31 12.53	51 56 15.7
15 32 12.5	6.3	32 51.28	32 25.9	24 39.95	+18.99	-0 9.56	+13.30	-1.88	-10.00	15 32 44.46	55 2 39.1
15 38 58.4	8.8	39 36.38	39 5.9	31 28.30	+22.87	-0 9.56	+12.67	-1.92	- 9.70	15 39 29.44	54 55 55.7
15 42 58.5	8.5	43 39.14	43 4.8	5 38.00	+27.34	-0 9.51	+ 9.82	-1.88	- 9.30	15 43 32.66	52 21 48.9
15 50 52.0	8.6	51 32.56	51 2.7	14 0.25	+24.96	-0 9.48	+ 8.08	-1.87	- 8.70	15 51 26.35	50 13 24.9
15 54 35.3	9.4	55 19.60	.....	.....	.....	-0 9.48	.....	-1.90	.....	15 55 13.26	.....
16 0 34.5	8.7	1 13.66	0 43.8	58 25.25	+23.76	-0 9.49	+10.42	-1.98	- 8.70	16 1 6.87	52 29 3.2
16 2 21.0	9.3	2 58.18	2 32.0	1 29.35	+20.85	-0 9.49	+10.15	-1.99	- 8.60	16 2 51.37	52 25 56.4
16 5 15.1	8.7	5 55.10	5 29.5	21 3.90	+21.43	-0 9.47	+ 7.73	-1.94	- 8.20	16 5 48.69	50 6 21.1
16 7 1.7	8.5	7 39.34	7 5.1	59 53.40	+27.20	-0 9.49	+10.54	-2.01	- 8.50	16 7 32.45	52 27 40.3
16 8 51.2	8.9	9 28.90	8 57.6	22 36.10	+25.10	-0 9.49	+ 9.89	-2.01	- 8.30	16 9 22.06	52 4 55.5
16 10 30.0	8.8	11 8.30	10 45.1	10 29.90	+18.52	-0 9.48	+ 9.91	-2.02	- 8.30	16 11 1.40	52 16 55.5
16 12 57.0	8.8	13 35.18	13 7.1	33 9.50	+22.12	-0 9.48	+10.88	-2.06	- 8.30	16 13 28.11	52 54 21.0
16 13 38.5	8.8	14 15.48	13 58.3	46 40.00	+13.61	-0 9.48	+10.60	-2.05	- 8.20	16 14 8.46	52 40 42.0
16 15 57.7	8.5	16 35.08	16 7.1	31 16.30	+22.53	-0 9.47	+ 9.61	-2.04	- 7.90	16 16 28.18	51 56 14.5
16 17 27.1	8.8	18 5.82	17 36.5	50 0.45	+23.75	-0 9.47	+ 9.10	-2.04	- 7.90	16 17 58.95	51 37 31.4
16 18 33.2	9.7	19 11.66	18 51.2	11 12.60	+16.74	-0 9.46	+ 9.00	-2.04	- 7.90	16 19 4.85	51 16 12.4
16 21 9.9	8.0	21 48.38	21 22.6	43 20.05	+21.31	-0 9.55	+ 8.69	-2.04	- 7.70	16 21 41.55	50 44 10.0
16 22 39.9	9.4	23 20.84	22 48.8	46 24.95	+25.90	-0 9.46	+ 9.32	-2.07	- 7.70	16 23 13.90	51 41 10.7
16 25 4.4	8.1	25 41.84	25 10.7	26 4.65	+24.98	-0 9.46	+ 9.63	-2.09	- 7.70	16 25 34.80	52 1 31.0
16 29 8.4	6.9	29 46.06	29 11.4	3 19.30	+28.87	-0 9.43	+ 8.21	-2.06	- 7.30	16 29 39.31	50 24 20.2
16 35 23.0	9.0	36 1.42	35 37.0	9 19.60	+19.91	-0 9.44	+ 9.40	-2.12	- 7.10	16 35 54.40	51 18 13.8
16 37 14.1	9.8	37 52.44	37 21.7	55 4.30	+25.47	-0 9.43	+ 7.96	-2.10	- 7.00	16 37 45.56	50 32 33.8
16 38 37.5	9.8	39 15.06	38 43.6	0 50.50	+25.62	-0 9.44	+ 8.95	-2.12	- 7.00	16 39 7.99	51 26 49.1
16 40 19.5	9.6	40 57.50	40 27.3	37 22.35	+24.90	-0 9.43	+ 8.61	-2.12	- 6.90	16 40 50.53	50 50 16.7
16 52 24.4	9.1	53 3.18	52 37.9	9 16.45	+20.65	-0 9.42	+ 9.40	-2.15	- 6.50	16 52 56.03	51 18 22.6
16 52 59.3	8.7	53 39.58	53 59.2	48 39.35	-15.87	-0 9.42	+ 9.82	-2.20	- 6.50	16 53 32.32	51 38 23.7
16 56 47.3	7.6	57 22.00	56 53.6	14 3.85	+22.20	-0 9.44	+11.35	-2.26	- 6.50	16 57 14.35	53 13 39.7

ZONE 183, JULY 11, 1872.

15 43 3.8	9.0	43 42.28	43 17.0	28 58.65	+20.34	-0 7.98	+ 9.81	-1.83	- 9.60	15 43 37.44	51 58 21.4
15 55 25.2	9.1	56 2.80	55 32.4	22 47.15	+24.38	-0 7.98	+ 9.77	-1.90	- 9.20	15 55 57.72	52 4 40.1
16 4 8.2	8.8	4 47.74	4 22.9	24 22.20	+20.35	-0 7.97	+ 9.01	-1.92	- 8.80	16 4 42.72	51 3 2.6
16 5 12.0	6.9	5 48.00	5 13.0	57 3.60	+29.06	-0 7.96	+ 7.99	-1.92	- 8.70	16 5 43.06	50 30 29.2
16 10 15.5	9.3	10 56.18	10 26.4	19 30.85	+24.93	-0 7.95	+ 8.04	-1.93	- 8.40	16 10 51.25	50 7 59.4
16 13 21.7	9.1	14 0.62	13 27.3	32 28.40	+27.40	-0 7.97	+ 8.50	-1.97	- 8.30	16 13 55.48	50 55 5.6
16 15 57.7	8.4	16 33.66	15 59.4	31 20.20	+27.52	-0 7.99	+ 9.39	-2.00	- 8.40	16 16 28.28	51 56 15.3
16 21 20.2	7.3	21 55.82	21 23.7	27 32.80	+25.80	-0 7.99	+ 9.62	-2.04	- 8.30	16 21 50.33	52 0 2.6
16 22 1.6	9.2	22 39.72	22 24.3	28 51.40	+12.93	-0 7.96	+ 8.01	-1.99	- 8.00	16 22 34.64	49 58 30.0
16 30 26.1	6.7	31 1.86	30 32.7	57 44.90	+23.20	-0 8.00	+10.20	-2.09	- 8.00	16 30 56.15	52 29 51.0
16 31 26.6	8.9	32 2.68	31 43.0	26 42.50	+15.83	-0 7.99	+ 9.68	-2.08	- 7.90	16 31 57.07	52 0 45.8
16 33 14.2	8.2	33 49.36	33 21.1	57 12.50	+22.49	-0 8.00	+10.16	-2.11	- 7.90	16 33 43.61	52 30 23.4
16 38 30.9	9.3	39 6.76	38 27.5	11 7.95	+31.39	-0 7.99	+ 9.60	-2.13	- 7.60	16 39 0.99	52 16 37.9
16 40 8.1	8.5	40 45.50	40 19.8	43 30.70	+20.31	-0 8.01	+10.64	-2.14	- 7.60	16 40 39.60	52 44 5.5
16 41 13.9	8.6	41 49.84	41 13.7	25 17.45	+29.63	-0 7.98	+ 8.26	-2.10	- 7.40	16 41 44.30	51 2 26.2
16 46 8.8	8.7	46 45.06	46 18.7	35 34.60	+20.80	-0 8.01	+10.37	-2.17	- 7.40	16 46 39.07	52 52 3.5
16 51 28.0	8.1	52 2.62	51 38.4	17 49.40	+19.38	-0 7.99	+ 9.98	-2.18	- 7.10	16 51 56.73	52 9 48.5

ZONE 184, JULY 14, 1872.												
R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.	
						R. A.	Dec.	R. A.	Dec.			
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "	
15 43 3.8	8.9	43 40.34	43 6.1	29 6.15	+27.51	-0 6.12	+ 9.82	-1.76	-10.10	15 43 37.43	51 58 19.4	
15 55 25.2	8.9	56 0.80	55 30.7	22 45.00	+24.14	-0 6.14	+ 9.79	-1.84	- 9.70	15 55 57.62	52 4 40.3	
16 4 8.2	8.8	4 45.78	4 12.9	24 28.00	+27.00	-0 6.12	+ 8.96	-1.86	- 9.30	16 4 42.67	51 3 1.7	
16 5 12.0	6.5	5 46.04	5 20.3	56 54.55	+21.34	-0 6.12	+ 8.19	-1.85	- 9.20	16 5 43.01	50 30 29.1	
16 10 15.5	9.0	10 54.36	10 22.1	19 31.70	+27.02	-0 6.12	+ 8.06	-1.88	- 9.00	16 10 51.31	50 7 58.9	
16 13 21.7	9.1	13 58.68	13 26.2	32 26.45	+26.75	-0 6.13	+ 8.57	-1.91	- 9.00	16 13 55.44	50 55 5.1	
16 15 57.7	8.0	16 31.58	15 57.9	31 18.95	+27.12	-0 6.15	+ 9.38	-1.94	- 9.10	16 16 28.10	51 56 14.3	
16 16 53.7	9.3	17 28.50	17 36.4	3 10.50	- 6.43	-0 6.14	+ 9.38	-1.94	- 8.90	16 17 25.11	51 23 49.6	
16 21 20.2	7.0	21 53.86	21 26.6	27 27.55	+21.94	-0 6.15	+ 9.72	-1.98	- 8.90	16 21 50.27	52 0 2.3	
16 22 1.6	9.4	22 37.88	22 19.8	28 51.35	+15.19	-0 6.12	+ 8.04	-1.93	- 8.60	16 22 34.70	49 58 30.6	
16 28 57.3	9.3	29 31.08	29 49.6	7 39.80	-14.76	-0 6.15	+10.23	-2.02	- 8.60	16 29 27.33	52 19 16.0	
16 30 26.1	6.6	30 59.88	30 47.8	57 30.70	+ 9.62	-0 6.17	+10.37	-2.03	- 8.60	16 30 56.06	52 29 50.0	
16 31 26.6	8.8	32 0.76	31 51.0	26 33.55	+ 7.87	-0 6.15	+ 9.76	-2.03	- 8.50	16 31 57.04	52 0 45.1	
16 33 14.2	7.3	33 47.48	33 14.9	57 13.70	+25.90	-0 6.16	+10.10	-2.05	- 8.50	16 33 43.63	52 30 23.8	
16 38 30.9	9.2	39 4.76	38 28.8	11 5.40	+28.76	-0 6.15	+ 9.66	-2.07	- 8.30	16 39 0.89	52 16 36.0	
16 40 8.1	8.3	40 43.52	40 12.9	43 33.45	+24.19	-0 6.17	+10.60	-2.09	- 8.20	16 40 39.51	52 44 4.8	
16 41 13.9	8.4	41 47.94	41 16.9	25 12.75	+25.45	-0 6.14	+ 8.39	-2.05	- 8.00	16 41 44.29	51 2 25.0	
16 46 8.8	8.9	46 43.06	45 59.9	35 46.90	+34.04	-0 6.17	+10.13	-2.12	- 8.00	16 46 38.96	52 52 2.4	
16 51 28.0	8.0	52 0.66	51 33.8	17 50.15	+21.64	-0 6.17	+ 9.96	-2.13	- 7.80	16 51 56.64	52 9 48.1	
ZONE 185, JULY 16, 1872.												
16 16 44.5	6.0	17 17.10	16 42.0	7 22.00	+28.00	-0 4.86	+ 9.82	-1.92	- 9.50	16 17 14.85	52 20 12.2	
16 28 42.1	8.6	29 16.72	28 50.2	0 29.55	+22.03	-0 4.84	+ 7.87	-1.94	- 8.90	16 29 14.67	50 27 0.2	
16 30 59.0	9.0	31 32.12	31 2.4	46 23.95	+24.56	-0 4.84	+ 8.17	-1.96	- 8.80	16 31 30.00	50 41 9.3	
16 31 55.0	8.8	32 26.76	32 18.6	54 23.70	+ 6.51	-0 4.86	+10.60	-2.00	- 9.00	16 32 24.26	52 32 53.9	
16 41 0.7	9.7	41 33.04	41 10.4	7 7.80	+18.43	-0 4.85	+ 9.00	-2.02	- 8.50	16 41 30.66	51 20 22.8	
16 52 56.6	6.8	53 28.20	52 54.9	34 6.00	+26.23	-0 4.88	+10.71	-2.13	- 8.30	16 53 25.32	52 53 37.4	
16 54 37.3	8.8	55 9.52	54 38.5	28 35.75	+24.92	-0 4.87	+ 9.74	-2.10	- 8.10	16 55 6.84	51 59 6.0	
17 3 8.2	8.8	3 39.18	3 11.2	44 21.30	+22.64	-0 4.87	+ 9.61	-2.13	- 7.80	17 3 36.47	51 43 20.4	
17 5 34.0	9.4	6 4.86	5 29.9	40 17.50	+27.63	-0 4.89	+10.08	-2.17	- 7.80	17 6 1.88	52 47 30.3	
17 7 12.8	6.1	7 41.90	7 16.8	53 55.55	+19.91	-0 4.87	+10.42	-2.17	- 7.70	17 7 38.97	52 33 45.4	
17 8 44.5	8.9	9 14.56	8 51.2	16 31.25	+18.73	-0 4.87	+ 9.75	-2.16	- 7.70	17 9 11.70	52 11 8.2	
17 9 38.5	9.2	10 9.52	9 59.2	26 54.35	+ 8.27	-0 4.87	+ 9.74	-2.16	- 7.50	17 10 6.68	52 0 35.3	
17 12 33.9	8.2	13 5.28	12 34.7	31 10.35	+24.63	-0 4.87	+ 9.38	-2.18	- 7.40	17 13 2.43	51 56 36.0	
17 15 10.0	8.3	15 42.48	15 13.9	25 41.20	+23.48	-0 4.85	+ 8.42	-2.16	- 7.30	17 15 39.82	51 2 3.6	
17 16 32.5	7.0	17 2.06	16 30.8	27 20.35	+25.15	-0 4.87	+ 9.58	-2.19	- 7.30	17 16 59.17	52 0 27.8	
ZONE 186, JULY 22, 1872.												
16 16 44.5	7.2	17 16.48	16 48.1	7 16.05	+22.65	-0 4.31	+10.15	-1.78	-10.50	16 17 14.92	52 20 11.5	
16 30 59.0	9.4	31 31.52	31 6.7	46 18.05	+20.51	-0 4.29	+ 8.42	-1.83	- 9.90	16 31 30.08	50 41 9.7	
16 31 55.0	8.9	32 25.92	32 39.2	54 5.35	-10.56	-0 4.31	+10.75	-1.87	-10.00	16 32 24.10	52 32 53.8	
16 41 0.7	9.7	41 32.48	41 4.8	7 9.80	+22.92	-0 4.30	+ 9.13	-1.90	- 9.60	16 41 30.77	51 20 23.8	
16 52 56.6	6.8	53 27.48	52 53.5	34 4.55	+26.78	-0 4.32	+10.89	-1.99	- 9.50	16 53 25.30	52 53 37.8	
16 54 37.3	8.9	55 8.78	54 36.3	28 34.70	+26.13	-0 4.31	+ 9.89	-1.98	- 9.30	16 55 6.78	51 59 6.6	
17 3 8.2	9.0	3 38.44	3 16.0	44 14.50	+18.12	-0 4.30	+ 9.84	-2.02	- 9.00	17 3 36.41	51 43 21.2	
17 5 57.7	9.2	6 27.46	6 23.7	33 45.95	+ 2.99	-0 4.31	+11.13	-2.06	- 9.10	17 6 25.15	52 53 36.4	
17 7 12.8	6.0	7 41.20	7 31.6	53 42.60	+ 7.62	-0 4.30	+10.71	-2.06	- 9.00	17 7 38.95	52 33 44.5	

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
17 8 44.5	9.0	9 13.84	9 29.6	15 57.60	-12.64	-0 4.30	+ 9.88	-2.06	- 9.00	17 9 11.65	52 11 8.8
17 10 14.9	9.2	10 45.26	10 32.4	24 1.10	+10.35	-0 4.30	+10.12	-2.06	- 8.90	17 10 43.09	52 3 29.0
17 12 33.9	7.0	13 4.52	12 39.2	31 4.10	+20.36	-0 4.30	+ 9.64	-2.07	- 8.80	17 13 2.35	51 56 36.2
17 16 32.5	7.9	17 1.54	16 35.7	27 13.60	+20.73	-0 4.30	+ 9.82	-2.09	- 8.60	17 16 59.32	52 0 28.5
ZONE 187, JULY 24, 1872.											
16 39 13.6	8.0	39 43.90	39 33.1	21 32.45	+ 8.46	-0 3.83	+10.91	-1.88	-10.30	16 39 42.39	53 5 48.3
16 40 29.0	7.7	40 58.92	40 54.6	18 10.10	+ 3.44	-0 3.81	+10.13	-1.87	-10.10	16 40 57.60	52 9 5.4
16 42 40.5	8.1	43 10.14	42 40.4	25 53.80	+23.31	-0 3.83	+10.66	-1.90	-10.20	16 43 8.59	53 1 42.5
16 46 10.5	9.2	46 40.48	46 15.2	50 34.05	+20.05	-0 3.82	+10.16	-1.91	-10.10	16 46 38.98	52 36 59.5
16 47 10.2	8.7	47 40.18	47 11.0	4 19.50	+23.26	-0 3.82	+10.27	-1.91	-10.00	16 47 38.72	52 23 17.7
16 49 9.6	8.4	49 39.04	49 14.0	19 26.60	+19.58	-0 3.83	+11.14	-1.94	-10.00	16 49 37.39	53 8 8.3
16 52 7.6	8.7	52 35.90	52 25.5	49 46.00	+ 7.86	-0 3.86	+12.90	-1.98	-10.10	16 52 33.87	54 37 39.6
16 53 42.9	8.0	54 13.08	53 31.8	22 18.95	+33.13	-0 3.82	+ 9.54	-1.94	- 9.80	16 54 11.60	52 5 29.2
17 2 1.7	8.6	2 31.42	2 20.6	56 6.05	+ 8.58	-0 3.83	+10.25	-1.99	- 9.60	17 2 29.75	52 31 20.6
ZONE 188, JULY 27, 1872.											
16 39 13.6	8.5	39 43.60	39 29.4	21 34.10	+11.13	-0 3.60	+10.96	-1.80	-10.80	16 39 42.40	53 5 48.2
16 40 29.0	8.0	40 58.66	40 39.4	18 21.60	+15.46	-0 3.58	+10.10	-1.80	-10.60	16 40 57.64	52 9 4.8
16 42 40.5	8.6	43 9.80	42 44.4	25 49.95	+19.94	-0 3.57	+10.66	-1.82	-10.70	16 43 8.59	53 1 41.9
16 46 10.5	9.5	46 40.20	46 10.0	50 37.55	+23.93	-0 3.59	+10.16	-1.84	-10.60	16 46 39.00	52 36 58.7
16 47 10.2	8.8	47 39.76	47 28.9	4 6.15	+ 8.68	-0 3.59	+10.48	-1.84	-10.50	16 47 38.60	52 23 15.6
16 49 9.6	8.5	49 38.62	49 13.5	19 25.50	+19.66	-0 3.60	+11.18	-1.87	-10.50	16 49 37.27	53 8 8.4
16 52 7.6	8.8	52 35.56	52 22.1	49 47.60	+10.20	-0 3.62	+12.92	-1.91	-10.60	16 52 33.84	54 37 39.2
16 53 42.9	7.8	54 12.72	53 42.7	22 9.90	+24.62	-0 3.58	+ 9.80	-1.87	-10.30	16 54 11.55	52 5 28.9
17 2 1.7	8.7	2 31.16	1 54.7	56 25.10	+28.99	-0 3.59	+10.05	-1.92	-10.10	17 2 29.80	52 31 20.6
17 4 38.5	8.4	5 7.76	4 39.4	58 56.55	+22.06	-0 3.59	+10.31	-1.93	-10.10	17 5 6.38	52 28 43.2
17 5 57.7	9.2	6 26.58	5 46.3	34 13.90	+31.74	-0 3.59	+10.68	-1.95	-10.00	17 6 25.10	52 53 36.3
17 7 55.9	9.5	8 27.26	8 0.9	20 30.95	+21.16	-0 3.58	+ 9.71	-1.94	- 9.90	17 8 25.93	52 7 8.3
17 9 38.5	9.0	10 8.10	9 37.9	27 8.15	+24.27	-0 3.58	+ 9.71	-1.95	- 9.90	17 10 6.76	52 0 34.8
17 11 26.9	9.5	11 54.78	11 17.3	29 31.15	+28.79	-0 3.62	+11.90	-2.00	-10.00	17 11 52.98	53 58 18.7
17 13 44.0	8.2	14 12.36	13 44.2	56 16.00	+21.88	-0 3.61	+11.24	-2.00	- 9.90	17 14 10.65	53 31 27.0
17 15 21.0	9.3	15 49.48	15 28.5	15 55.90	+16.49	-0 3.60	+11.38	-2.00	- 9.80	17 15 47.84	53 11 42.4
17 16 52.6	9.0	17 22.56	16 52.7	14 10.45	+23.91	-0 3.58	+10.15	-1.99	- 9.70	17 17 21.12	52 13 34.5
ZONE 189, AUGUST 1, 1872.											
16 55 34.1	8.3	56 7.94	55 36.2	57 48.75	+25.19	-0 7.66	+10.28	-1.76	-11.10	16 56 2.71	52 29 50.4
17 1 56.7	8.7	2 31.90	2 5.8	5 49.15	+20.80	-0 7.67	+10.03	-1.80	-11.00	17 2 26.61	52 21 47.1
17 5 34.0	9.4	6 7.36	5 38.3	40 9.70	+22.97	-0 7.68	+10.42	-1.82	-10.90	17 6 1.94	52 47 30.2
17 7 12.8	6.0	7 44.46	7 13.1	53 57.95	+24.91	-0 7.67	+10.40	-1.83	-10.90	17 7 39.07	52 33 44.2
17 9 38.5	9.4	10 11.98	9 44.1	27 3.45	+22.42	-0 7.68	+ 9.77	-1.84	-10.80	17 10 6.65	52 0 36.5
17 12 18.9	9.2	12 50.78	12 19.2	40 37.80	+24.37	-0 7.71	+11.46	-1.88	-10.90	17 12 45.05	53 47 6.2
17 13 22.0	7.3	13 53.82	13 27.6	32 26.70	+20.62	-0 7.69	+10.80	-1.87	-10.80	17 13 48.28	52 55 13.3
17 14 32.1	8.2	15 5.56	14 30.5	52 39.45	+27.84	-0 7.68	+10.30	-1.87	-10.70	17 15 0.08	52 35 7.7
17 15 23.1	8.8	15 57.34	15 38.5	33 54.75	+14.46	-0 7.72	+12.09	-1.89	-10.80	17 15 51.55	53 53 40.9
17 17 33.0	9.0	18 6.32	17 41.6	12 26.10	+19.74	-0 7.69	+10.08	-1.88	-10.60	17 18 0.87	52 15 13.6
17 18 37.3	5.8	19 8.96	18 41.0	55 18.95	+21.72	-0 7.71	+11.23	-1.90	-10.70	17 19 3.23	53 32 24.0

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
17 20 29.7	8.4	21 0.62	20 26.6	59 57.80	+26.44	-0 7.71	+10.98	-1.92	-10.60	17 20 54.87	53 27 50.2
17 21 59.7	8.0	22 30.64	21 59.5	13 25.05	+24.30	-0 7.71	+11.16	-1.92	-10.60	17 22 24.93	53 14 21.4
17 24 42.1	8.8	25 14.16	24 42.7	20 40.55	+25.25	-0 7.70	+ 9.70	-1.91	-10.50	17 25 8.67	52 7 6.2
17 26 5.9	9.3	26 39.22	26 13.5	16 39.85	+20.57	-0 7.70	+ 9.92	-1.92	-10.40	17 26 33.70	52 11 2.9
17 27 10.8	3.0	27 42.20	27 17.7	4 1.15	+19.51	-0 7.70	+10.32	-1.93	-10.40	17 27 36.63	52 23 41.2
17 29 0.7	8.2	29 32.78	29 2.9	46 53.85	+23.66	-0 7.71	+10.45	-1.95	-10.40	17 29 27.12	52 40 53.3
17 29 55.4	9.6	30 28.44	30 2.8	57 59.35	+20.34	-0 7.70	+10.39	-1.95	-10.30	17 30 22.82	52 29 44.7
ZONE 190, AUGUST 5, 1872.											
16 55 34.1	8.0	56 17.80	55 51.6	57 43.95	+20.82	-0 17.69	+10.39	-1.66	-11.70	16 56 2.64	52 29 50.1
17 1 56.7	8.3	2 41.72	2 14.2	5 49.90	+21.92	-0 17.69	+10.04	-1.69	-11.60	17 2 26.52	52 21 46.6
17 5 34.0	9.3	6 17.24	5 39.2	40 16.05	+30.00	-0 17.71	+10.31	-1.72	-11.60	17 6 1.89	52 47 29.7
17 7 12.8	6.5	7 54.30	7 21.2	53 57.70	+26.26	-0 17.70	+10.41	-1.73	-11.50	17 7 38.98	52 33 45.0
17 10 14.9	9.0	10 58.26	10 27.0	24 13.95	+25.13	-0 17.71	+10.03	-1.74	-11.40	17 10 43.00	52 3 28.1
17 12 18.9	9.0	13 0.62	12 35.7	40 31.95	+19.20	-0 17.75	+11.60	-1.77	-11.50	17 12 44.96	53 47 6.2
17 13 22.0	6.8	14 3.76	13 36.6	32 27.20	+21.41	-0 17.73	+10.84	-1.78	-11.50	17 13 48.27	52 55 12.6
17 14 32.1	8.0	15 15.40	14 42.1	52 37.05	+26.41	-0 17.72	+10.36	-1.77	-11.40	17 14 59.98	52 35 7.7
17 15 23.1	8.9	16 7.30	15 51.3	33 52.45	+12.31	-0 17.75	+12.15	-1.79	-11.50	17 15 51.58	53 53 40.1
17 16 52.6	9.0	17 36.58	17 9.2	14 7.70	+21.91	-0 17.73	+10.25	-1.78	-11.30	17 17 21.20	52 13 33.2
17 18 37.3	5.0	19 18.86	18 43.9	55 23.65	+27.15	-0 17.75	+11.19	-1.81	-11.40	17 19 3.18	53 32 23.7
17 20 29.7	8.4	21 10.44	20 39.0	59 56.30	+24.42	-0 17.75	+11.08	-1.82	-11.30	17 20 54.75	53 27 48.8
17 21 59.7	8.0	22 40.50	22 12.9	13 22.25	+21.56	-0 17.76	+11.24	-1.82	-11.30	17 22 24.84	53 14 20.6
17 24 42.1	8.5	25 24.10	24 59.6	20 34.95	+19.64	-0 17.74	+ 9.83	-1.82	-11.20	17 25 8.66	52 7 5.3
17 26 5.9	9.4	26 49.12	26 12.9	16 48.80	+28.97	-0 17.74	+ 9.83	-1.83	-11.10	17 26 33.65	52 11 1.3
17 27 10.8	3.5	27 52.10	27 25.2	4 3.05	+21.42	-0 17.75	+10.42	-1.84	-11.10	17 27 36.57	52 23 40.4
17 29 0.7	8.0	29 42.72	29 10.4	46 54.60	+25.56	-0 17.77	+10.47	-1.85	-11.10	17 29 27.10	52 40 53.5
17 29 55.4	...	30 38.20	30 27.2	57 48.05	+ 8.74	-0 17.76	+10.56	-1.86	-11.10	17 30 22.61	52 29 43.5
ZONE 191, SEPTEMBER 28, 1872.											
20 28 40.8	7.5	29 1.98	28 33.5	54 43.55	-21.44	+0 8.27	+11.09	-1.52	-19.50	20 29 13.77	52 35 56.5
20 29 53.0	6.6	30 14.40	29 51.0	20 31.20	-17.78	+0 8.27	+10.14	-1.54	-19.50	20 30 26.25	52 10 11.8
20 31 23.7	9.1	31 44.92	31 9.8	35 32.70	-26.22	+0 8.27	+10.72	-1.55	-19.60	20 31 56.67	52 55 2.6
.....	8.8	33 27.92	33 12.0	37 57.70	-11.89	+0 8.27	+11.28	-1.57	-19.60	20 33 39.68	52 52 52.8
.....	9.3	38 5.18	37 45.8	36 5.00	-14.50	+0 8.27	+11.03	-1.60	-19.60	20 38 16.99	52 54 43.7
20 53 42.0	8.9	54 6.32	53 48.5	28 32.95	-13.57	+0 8.27	+10.49	-1.74	-19.60	20 54 18.34	52 2 19.2
20 57 55.8	8.6	58 20.30	58 12.0	26 4.85	- 6.32	+0 8.27	+10.25	-1.77	-19.60	20 58 32.35	52 4 55.2
20 59 20.7	6.2	59 46.58	59 15.6	43 24.55	-23.23	+0 8.27	+11.10	-1.78	-19.70	20 59 58.55	52 47 19.6
21 1 9.8	8.5	1 35.10	0 59.9	23 33.10	-26.85	+0 8.27	+10.33	-1.80	-19.60	21 1 47.17	52 7 7.1
21 2 45.3	9.0	3 10.66	2 53.7	58 13.40	-13.10	+0 8.28	+ 9.90	-1.81	-19.60	21 3 22.83	51 32 40.4
21 5 29.3	8.5	5 55.20	5 22.8	56 30.65	-24.40	+0 8.28	+10.58	-1.83	-19.60	21 6 7.26	52 34 13.0
21 8 17.6	8.4	8 44.38	8 23.1	18 4.05	-16.17	+0 8.28	+10.57	-1.86	-19.60	21 8 56.50	52 12 48.3
21 9 23.9	6.9	9 50.18	9 35.6	19 15.30	-11.09	+0 8.28	+10.78	-1.87	-19.60	21 10 2.31	52 11 42.6
21 12 9.9	8.5	12 36.20	12 15.9	51 50.70	-15.26	+0 8.28	+10.86	-1.89	-19.50	21 12 48.30	52 39 3.7
21 13 11.1	8.0	13 36.44	13 16.1	33 46.70	-15.50	+0 8.28	+10.41	-1.90	-19.50	21 13 48.64	51 57 7.2
21 16 7.1	8.9	16 33.36	16 56.4	40 36.60	+17.21	+0 8.28	+10.87	-1.92	-19.40	21 16 45.48	52 50 51.0
21 17 39.6	8.5	18 6.76	17 37.8	44 55.65	-22.24	+0 8.28	+ 9.58	-1.93	-19.30	21 18 19.03	51 45 51.6
21 17 41.8	8.8	18 9.08	17 38.8	44 30.17	-23.23	+0 8.28	+ 9.56	-1.93	-19.30	21 18 21.35	51 46 16.1
21 19 55.1	8.0	20 21.66	19 57.8	41 19.65	-17.89	+0 8.28	+10.94	-1.95	-19.60	21 20 33.82	52 49 33.4
21 21 0.9	7.7	21 28.04	21 10.2	11 41.25	-13.48	+0 8.28	+10.54	-1.96	-19.60	21 21 40.27	52 19 16.0
21 22 25.7	9.2	22 53.16	22 53.9	57 17.05	+ 0.53	+0 8.28	+10.96	-1.97	-19.60	21 23 5.37	52 33 54.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
21 25 13.4	8.9	25 41.06	25 32.7	14 32.35	- 6.37	+0 8.28	+10.95	-1.99	-19.50	21 25 53.33	52 16 33.2
21 27 23.5	8.5	27 52.28	27 16.8	18 50.20	-27.03	+0 8.28	+10.45	-2.01	-19.50	21 28 4.58	52 11 54.5
21 28 54.5	8.4	29 22.62	28 58.5	22 49.10	-18.40	+0 8.28	+10.47	-2.02	-19.50	21 29 34.95	52 8 4.6
21 30 12.0	8.7	30 41.70	30 35.0	34 49.50	- 5.00	+0 8.28	+11.68	-2.03	-19.50	21 30 53.95	52 56 19.0

ZONE 192, OCTOBER 2, 1872.

20 28 40.8	8.0	29 2.04	28 31.0	54 42.10	-22.80	+0 8.16	+11.06	-1.40	-20.10	20 29 13.84	52 35 56.5
20 29 53.0	7.5	30 14.40	29 51.6	20 31.30	-17.32	+0 8.16	+10.18	-1.42	-20.10	20 30 26.26	52 10 12.1
20 31 23.7	9.0	31 45.00	31 16.4	35 36.75	-21.86	+0 8.16	+10.90	-1.43	-20.20	20 31 56.76	52 55 3.1
.....	8.8	33 27.92	33 2.8	37 55.60	-18.77	+0 8.16	+11.21	-1.44	-20.20	20 33 39.70	52 52 47.8
.....	9.1	38 4.88	37 30.0	35 46.60	-26.08	+0 8.16	+10.82	-1.49	-20.20	20 38 16.69	52 54 50.2
20 44 19.9	6.7	44 44.24	44 11.7	3 48.10	-25.09	+0 8.16	+ 9.69	-1.55	-20.20	20 44 56.28	51 26 49.9
20 45 43.2	9.0	46 7.26	46 35.2	16 11.50	+21.17	+0 8.16	+10.31	-1.56	-20.30	20 46 19.20	52 15 13.6
20 48 0.3	9.3	48 24.40	48 6.0	59 39.00	-13.87	+0 8.16	+11.15	-1.58	-20.30	20 48 36.32	52 31 12.3
20 49 42.4	8.9	50 7.12	49 36.1	32 4.20	-23.13	+0 8.16	+11.13	-1.59	-20.40	20 50 18.99	52 58 38.1
20 51 43.2	9.5	52 7.24	52 6.2	47 19.40	- 0.75	+0 8.16	+11.15	-1.61	-20.40	20 52 19.16	52 43 45.6
20 53 42.0	9.2	54 6.22	53 37.4	28 22.80	-21.95	+0 8.16	+10.36	-1.63	-20.30	20 54 18.24	52 2 20.7
20 55 2.0	9.4	55 26.84	55 5.3	21 25.40	-16.34	+0 8.17	+10.33	-1.64	-20.40	20 55 38.87	52 9 23.9
20 56 11.5	9.3	56 35.90	56 17.5	3 4.40	-13.89	+0 8.17	+10.88	-1.65	-20.40	20 56 47.89	52 27 48.1
20 57 55.8	8.7	58 20.34	57 45.9	25 42.80	-26.19	+0 8.16	+ 9.96	-1.67	-20.30	20 58 32.38	52 4 56.9
20 59 20.7	5.8	59 46.54	59 16.1	43 24.80	-22.78	+0 8.17	+11.13	-1.67	-20.40	20 59 58.52	52 47 19.6
21 1 9.8	8.4	1 34.98	1 0.9	23 33.95	-25.94	+0 8.17	+10.35	-1.69	-20.40	21 1 47.06	52 7 6.9
21 2 45.3	9.1	3 10.54	2 37.5	57 59.60	-25.43	+0 8.17	+ 9.68	-1.71	-20.40	21 3 22.70	51 32 41.4
21 5 29.3	9.0	5 55.22	.....	.....	.....	+0 8.17	.....	-1.73	.....	21 6 7.27	.....
21 8 17.6	8.9	8 44.42	8 8.7	17 51.25	-27.10	+0 8.17	+10.36	-1.75	-20.40	21 8 56.54	52 12 49.7
21 9 23.9	6.2	9 50.14	9 22.9	19 5.40	-20.66	+0 8.17	+10.63	-1.76	-20.40	21 10 2.27	52 11 42.5
21 11 3.9	8.9	11 30.08	11 5.8	58 10.15	-18.31	+0 8.17	+10.94	-1.78	-20.40	21 11 42.18	52 32 40.7
21 12 9.9	8.0	12 36.12	12 22.2	51 55.90	-10.45	+0 8.17	+10.84	-1.78	-20.40	21 12 48.22	52 39 2.9
21 13 11.1	8.1	13 36.40	13 16.6	33 45.00	-15.12	+0 8.17	+10.42	-1.79	-20.40	21 13 48.60	51 57 8.9
21 14 38.6	9.2	15 6.18	14 47.4	28 32.05	-14.01	+0 8.17	+11.56	-1.81	-20.40	21 15 18.24	53 2 24.3
21 16 7.1	8.8	16 33.46	16 1.1	39 55.10	-24.25	+0 8.17	+10.70	-1.82	-20.40	21 16 45.57	52 50 50.4
21 17 39.6	8.5	18 6.90	17 51.2	45 7.13	-12.04	+0 8.17	+10.41	-1.83	-20.40	21 18 19.16	51 45 50.6
21 17 41.8	8.8	18 8.98	17 52.2	44 41.65	-12.88	+0 8.17	+10.40	-1.83	-20.40	21 18 21.24	51 46 15.2
21 19 55.1	8.2	20 21.62	19 51.9	41 15.65	-22.24	+0 8.17	+10.89	-1.85	-20.40	21 20 33.77	52 49 32.7
21 21 0.9	7.8	21 28.04	20 59.4	11 32.85	-21.66	+0 8.17	+10.42	-1.86	-20.40	21 21 40.26	52 19 15.8
21 22 25.7	9.3	22 53.08	22 35.2	57 2.45	-13.49	+0 8.17	+10.87	-1.87	-20.40	21 23 5.28	52 33 55.1
21 23 59.6	9.1	24 26.86	23 48.2	15 56.40	-29.35	+0 8.17	+ 9.97	-1.88	-20.40	21 24 39.12	52 14 44.6
21 25 13.4	8.8	25 41.14	25 18.3	14 20.65	-17.29	+0 8.17	+10.84	-1.89	-20.40	21 25 53.40	52 16 33.5
21 27 23.5	8.6	27 52.26	27 18.6	18 51.75	-25.59	+0 8.17	+10.51	-1.91	-20.40	21 28 4.55	52 11 54.1
21 28 54.5	8.6	29 22.52	28 48.6	22 40.60	-25.78	+0 8.17	+10.28	-1.92	-20.40	21 29 34.84	52 8 5.1
21 30 12.0	8.9	30 41.58	30 12.5	34 33.00	-21.65	+0 8.17	+11.44	-1.93	-20.40	21 30 53.82	52 56 18.2

ZONE 193, OCTOBER 3, 1872.

20 41 47.4	8.8	42 11.18	41 35.4	11 16.25	-27.11	+0 8.08	+10.14	-1.50	-20.40	20 42 23.03	52 19 19.8
20 42 51.0	8.5	43 15.34	42 56.7	10 41.90	-14.40	+0 8.08	+ 9.28	-1.51	-20.30	20 43 27.33	51 20 6.3
20 45 46.6	8.2	46 10.32	45 24.4	23 13.15	-35.23	+0 8.08	+ 9.87	-1.53	-20.40	20 46 22.23	52 7 15.2
20 49 10.7	6.8	49 32.34	48 51.4	28 18.55	-29.76	+0 8.06	+12.20	-1.55	-20.60	20 49 43.99	54 2 18.1
20 52 13.7	9.0	52 38.36	52 10.8	10 9.45	-20.97	+0 8.08	+10.14	-1.58	-20.50	20 52 50.29	52 20 34.6
20 53 54.5	8.8	54 19.26	53 50.4	0 32.90	-21.30	+0 8.07	+11.45	-1.60	-20.50	20 54 31.02	53 30 12.5
20 55 2.0	9.3	55 26.96	55 7.3	21 27.45	-14.97	+0 8.08	+10.21	-1.61	-20.50	20 55 38.93	52 9 23.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
20 57 55.8	8.6	58 20.38	57 49.6	25 45.50	-23.45	+0 8.08	+ 9.89	-1.64	-20.60	20 58 32.37	52 4 56.8
20 59 38.3	8.6	0 3.82	59 45.7	15 18.10	-13.80	+0 8.08	+10.21	-1.65	-20.60	21 0 15.81	52 15 34.5
21 1 7.2	8.2	1 31.42	0 54.4	20 34.80	-27.48	+0 8.07	+10.98	-1.66	-20.60	21 1 43.29	53 10 5.2
21 2 21.0	8.3	2 46.42	2 21.1	3 48.05	-18.67	+0 8.07	+11.86	-1.67	-20.60	21 2 58.26	53 27 1.8
21 3 49.0	6.0	4 13.56	3 41.5	47 34.35	-24.09	+0 8.08	+10.83	-1.69	-20.60	21 4 25.51	52 43 9.4
21 5 25.6	8.2	5 50.38	5 20.8	16 43.10	-21.95	+0 8.07	+11.29	-1.70	-20.60	21 6 2.27	53 14 3.5
21 6 54.1	8.4	7 18.74	6 55.6	54 43.25	-16.98	+0 8.07	+12.21	-1.71	-20.70	21 7 30.60	53 36 9.4
21 8 29.1	8.9	8 55.98	8 21.0	33 21.10	-26.13	+0 8.08	+11.13	-1.73	-20.60	21 9 7.94	52 57 21.7
21 9 47.8	7.5	10 12.12	9 47.4	33 10.85	-18.01	+0 8.06	+12.38	-1.74	-20.70	21 10 23.94	53 57 41.5
21 11 54.1	9.0	12 21.16	11 56.9	43 1.35	-18.21	+0 8.08	+11.08	-1.76	-20.60	21 12 33.17	52 47 49.9
ZONE 194, OCTOBER 12, 1872.											
20 41 47.4	8.8	42 11.56	41 49.9	11 28.25	-16.43	+0 7.30	+10.71	-1.22	-21.60	20 42 22.91	52 19 19.6
20 42 51.0	8.2	43 15.88	42 54.5	10 41.30	-16.56	+0 7.30	+ 9.52	-1.25	-21.50	20 43 27.35	51 20 5.5
20 45 46.6	8.3	46 11.00	45 46.1	23 30.45	-18.98	+0 7.31	+10.63	-1.26	-21.60	20 46 22.41	52 7 15.5
20 48 3.7	9.2	48 28.26	48 6.5	19 33.40	-16.56	+0 7.31	+10.97	-1.29	-21.70	20 48 39.67	52 11 15.7
20 49 10.7	6.4	49 32.82	48 52.6	28 20.25	-29.25	+0 7.31	+12.59	-1.27	-21.80	20 49 44.00	54 2 17.9
20 50 25.3	9.2	50 49.54	50 19.8	23 14.05	-22.08	+0 7.30	+11.74	-1.29	-21.80	20 51 0.84	53 7 30.6
20 52 13.7	8.9	52 38.72	52 13.9	10 12.25	-18.77	+0 7.31	+10.52	-1.32	-21.80	20 52 50.14	52 20 34.9
20 53 54.5	8.6	54 19.82	54 0.3	0 40.65	-14.37	+0 7.31	+11.97	-1.32	-21.90	20 54 31.10	53 30 12.6
20 56 30.6	8.7	56 55.34	56 21.2	48 13.00	-25.60	+0 7.32	+11.23	-1.35	-21.90	20 57 6.76	52 42 28.7
20 57 55.8	8.0	58 20.78	57 48.9	25 44.70	-24.28	+0 7.32	+10.21	-1.38	-21.90	20 58 32.27	52 4 57.6
20 59 38.3	8.9	0 4.12	59 40.9	15 17.80	-17.52	+0 7.32	+10.49	-1.39	-21.90	21 0 15.61	52 15 31.7
21 1 7.2	7.7	1 31.84	1 11.1	20 47.20	-15.37	+0 7.31	+11.55	-1.40	-22.00	21 1 43.21	53 10 5.8
21 2 21.0	8.0	2 47.00	2 18.0	3 44.55	-21.40	+0 7.31	+12.14	-1.41	-22.00	21 2 58.34	53 27 3.2
21 3 49.0	7.0	4 14.10	3 46.7	47 38.45	-20.56	+0 7.32	+11.26	-1.43	-22.00	21 4 25.55	52 43 9.6
21 5 25.6	8.0	5 50.88	5 29.0	16 49.50	-16.24	+0 7.31	+11.76	-1.44	-22.00	21 6 2.27	53 14 3.6
21 6 54.1	8.2	7 19.36	7 4.1	54 48.70	-11.25	+0 7.31	+11.15	-1.45	-22.10	21 7 30.72	53 36 9.0
21 8 29.1	8.9	8 56.58	8 20.1	33 18.55	-27.24	+0 7.32	+11.46	-1.47	-22.00	21 9 8.04	52 57 23.8
21 9 47.8	7.9	10 12.62	9 58.1	33 18.65	-10.57	+0 7.33	+12.88	-1.48	-22.20	21 10 23.97	53 57 41.9
21 11 54.1	8.8	12 21.76	12 1.7	43 6.15	-15.06	+0 7.33	+11.50	-1.50	-22.10	21 12 33.28	52 47 49.0
ZONE 195, NOVEMBER 16, 1872.											
23 0 45.5	6.0	1 9.88	0 43.1	20 17.85	+21.49	+0 22.14	+10.60	-1.78	-27.50	23 1 38.15	52 8 25.1
23 2 26.0	9.1	2 51.84	2 20.8	5 52.50	+25.80	+0 22.13	+ 8.50	-1.81	-27.20	23 3 20.19	50 22 53.0
23 3 30.1	9.0	4 00.00	3 25.3	11 7.60	+28.33	+0 22.14	+ 9.56	-1.82	-27.40	23 4 28.33	51 17 41.4
23 5 40.4	8.6	6 6.30	5 40.4	12 3.95	+21.15	+0 22.14	+ 9.77	-1.85	-27.40	23 6 34.65	51 16 38.2
23 6 44.2	8.3	7 9.48	6 46.5	2 13.40	+18.31	+0 22.15	+11.13	-1.86	-27.60	23 7 37.80	52 26 27.1
23 8 0.5	9.1	8 28.22	8 19.1	52 14.85	+ 7.22	+0 22.15	+11.43	-1.87	-27.60	23 8 56.56	52 36 15.0
23 9 19.9	9.0	9 44.46	9 18.0	11 55.40	+21.17	+0 22.15	+10.89	-1.89	-27.60	23 10 12.82	52 16 47.9
23 10 26.9	9.3	10 52.94	10 40.8	0 41.45	+ 9.63	+0 22.15	+11.12	-1.91	-27.60	23 11 21.30	52 27 50.6
23 12 24.1	8.2	12 49.52	12 26.0	55 42.75	+18.66	+0 22.15	+11.11	-1.93	-27.60	23 13 17.89	52 32 58.4
23 13 45.6	8.6	14 11.62	13 47.5	53 58.55	+19.12	+0 22.15	+11.44	-1.95	-27.60	23 14 40.00	52 34 43.5
23 15 51.3	9.0	16 20.06	15 49.7	47 12.45	+24.06	+0 22.16	+11.37	-1.97	-27.60	23 16 48.48	52 41 34.6
23 17 58.0	8.1	18 24.74	18 19.0	44 54.60	+ 4.51	+0 22.16	+11.42	-2.00	-27.70	23 18 53.17	52 43 32.9
23 19 2.1	8.8	19 29.56	19 21.5	35 22.00	+ 6.38	+0 22.16	+11.62	-2.01	-27.70	23 19 58.01	52 53 7.6
23 20 42.6	9.4	21 10.36	20 48.2	6 6.20	+17.70	+0 22.15	+10.98	-2.04	-27.60	23 21 38.82	52 22 34.3
23 22 5.3	6.5	22 31.90	22 11.6	29 58.60	+15.96	+0 22.16	+11.61	-2.05	-27.70	23 23 0.37	52 58 40.7

ZONE 196, NOVEMBER 17, 1872.

R. A. 1855.o. According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.o.	Mean Dec. 1875.o.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s "	"	h m s	° ' "
23 0 45.5	5.8	1 9.14	0 37.9	20 17.60	+25.01	+0 22.92	+10.66	-1.76	-27.60	23 1 38.21	52 8 27.9
23 2 26.0	9.3	2 50.84	2 16.5	5 51.00	+28.55	+0 22.91	+ 8.53	-1.79	-27.30	23 3 19.99	50 22 56.3
23 3 30.1	9.2	3 59.10	3 33.0	11 0.15	+21.23	+0 22.91	+ 9.81	-1.80	-27.50	23 4 28.22	51 17 41.0
23 5 40.4	8.7	6 5.46	5 45.0	11 58.50	+16.74	+0 22.91	+ 9.95	-1.83	-27.50	23 6 34.60	51 16 38.4
23 6 44.2	8.4	7 8.76	6 36.4	2 18.15	+25.79	+0 22.93	+11.15	-1.84	-27.60	23 7 37.88	52 26 29.0
23 8 0.5	9.1	8 27.18	7 59.3	52 29.10	+22.05	+0 22.93	+11.39	-1.85	-27.70	23 8 56.32	52 36 14.5
23 9 19.9	9.0	9 43.44	9 19.9	11 52.45	+18.77	+0 22.93	+11.05	-1.87	-27.60	23 10 12.60	52 16 47.7
23 10 26.9	9.6	10 52.10	10 36.7	0 42.50	+12.25	+0 22.94	+11.23	-1.89	-27.70	23 11 21.27	52 27 51.3
23 11 21.6	...	11 45.42	.....	.....	.....	+0 22.94	.....	-1.89	.....	23 12 14.60	.....
23 12 24.1	8.4	12 48.62	.....	.....	.....	+0 22.94	.....	-1.91	.....	23 13 17.80	.....
23 13 45.6	8.6	14 10.74	13 43.2	54 0.35	+21.82	+0 22.94	+11.52	-1.92	-27.70	23 14 39.94	52 34 43.5
23 15 51.3	9.3	16 19.22	15 42.5	47 14.95	+29.05	+0 22.94	+11.37	-1.95	-27.70	23 16 48.44	52 41 36.1
23 16 48.3	9.2	17 17.72	17 0.8	11 51.35	+13.50	+0 22.93	+11.12	-1.96	-27.70	23 17 46.95	52 16 43.9
23 17 58.0	8.0	18 23.94	18 10.3	45 0.25	+10.75	+0 22.94	+11.53	-1.98	-27.80	23 18 53.17	52 43 32.6
23 19 2.1	8.9	19 28.72	19 10.4	35 29.70	+14.42	+0 22.94	+11.70	-1.99	-27.80	23 19 57.97	52 53 7.1
23 32 3.0	7.8	32 30.10	32 0.5	54 31.80	+24.02	+0 22.94	+10.32	-2.15	-27.50	23 32 59.51	51 34 14.0
23 33 47.4	9.0	34 14.40	33 50.0	14 15.05	+19.51	+0 22.95	+11.23	-2.18	-27.60	23 34 43.81	52 14 27.1
23 35 53.9	9.5	36 23.22	35 58.2	3 21.30	+19.91	+0 22.96	+11.34	-2.20	-27.60	23 36 52.67	52 25 21.4
23 38 54.5	8.8	39 22.98	38 58.4	3 58.10	+19.59	+0 22.96	+11.38	-2.24	-27.60	23 39 52.46	52 24 44.4
23 41 14.3	8.7	41 43.02	41 9.4	54 7.90	+26.67	+0 22.96	+11.43	-2.27	-27.60	23 42 12.52	52 34 41.8
23 42 29.0	8.8	42 58.00	42 33.4	51 31.30	+19.50	+0 22.96	+11.38	-2.29	-27.60	23 43 27.50	52 37 11.2
23 44 44.5	9.0	45 12.62	44 43.3	58 2.60	+23.27	+0 22.96	+11.21	-2.32	-27.50	23 45 42.15	52 30 43.6
23 45 59.7	8.8	46 30.10	45 51.0	5 11.40	+31.15	+0 22.96	+10.79	-2.33	-27.50	23 46 59.65	52 23 42.3
23 47 32.4	8.1	48 3.04	47 31.8	40 37.60	+24.63	+0 22.97	+11.46	-2.35	-27.60	23 48 32.62	52 48 10.2
23 48 58.0	8.9	49 28.64	48 53.9	59 21.85	+27.59	+0 22.97	+11.37	-2.37	-27.50	23 49 58.22	52 29 28.9
23 50 30.2	9.2	51 1.26	50 41.4	35 33.25	+15.68	+0 22.97	+11.70	-2.39	-27.50	23 51 30.86	52 53 6.0
23 51 41.3	8.0	52 12.26	51 52.9	55 12.90	+15.40	+0 22.97	+11.29	-2.40	-27.50	23 52 41.88	52 33 25.6
23 53 28.1	8.9	53 59.82	53 34.3	35 44.85	-20.09	+0 22.98	+11.64	-2.43	-27.50	23 54 29.46	52 53 58.7
23 55 54.2	8.9	56 24.62	55 54.5	38 8.45	+23.75	+0 22.98	+11.77	-2.46	-27.50	23 56 54.28	52 50 38.9
23 57 52.7	9.3	58 24.72	57 46.3	19 52.75	+30.76	+0 22.97	+10.54	-2.48	-27.40	23 58 54.40	52 9 0.5

ZONE 197, NOVEMBER 20, 1872.

23 5 40.4	9.0	6 3.28	6 14.3	11 33.00	- 8.98	+0 25.04	+ 9.87	-1.75	-27.70	23 6 34.63	51 16 36.7
23 8 0.5	9.0	8 25.14	8 15.8	52 13.40	+ 7.38	+0 25.05	+11.42	-1.77	-28.00	23 8 56.48	52 36 14.1
23 9 19.9	8.8	9 41.30	9 28.8	11 42.55	+ 9.98	+0 25.05	+11.00	-1.79	-27.90	23 10 12.66	52 16 47.3
23 10 7.6	6.0	10 29.38	10 21.8	56 1.55	+ 6.03	+0 25.05	+11.25	-1.80	-28.00	23 11 0.74	52 32 24.5
23 12 24.1	8.2	12 46.40	12 20.5	55 42.35	+20.57	+0 25.05	+11.06	-1.83	-28.00	23 13 17.77	52 32 58.2
23 13 45.6	8.8	14 8.56	13 42.3	53 59.95	+20.87	+0 25.05	+11.40	-1.85	-28.00	23 14 39.94	52 34 41.3
23 15 51.3	8.8	16 16.98	15 44.7	47 10.60	+25.57	+0 25.05	+11.33	-1.88	-28.00	23 16 48.38	52 41 35.4
23 16 48.3	9.5	17 15.46	17 0.3	11 50.45	+12.14	+0 25.05	+10.90	-1.89	-28.00	23 17 46.88	52 16 41.7
23 17 58.0	7.7	18 21.80	18 4.3	45 3.35	+13.84	+0 25.05	+11.35	-1.90	-28.10	23 18 53.22	52 43 30.9
23 19 2.1	8.9	19 26.50	19 17.8	35 21.35	+ 6.85	+0 25.05	+11.62	-1.92	-28.10	23 19 57.93	52 53 6.3
23 20 42.6	9.3	21 7.28	20 39.4	6 9.90	+22.24	+0 25.06	+10.90	-1.94	-28.00	23 21 38.75	52 22 32.6
23 22 5.3	6.5	22 28.84	21 59.9	30 2.35	+22.72	+0 25.06	+11.49	-1.96	-28.10	23 23 0.30	52 58 41.1
23 26 0.3	8.9	26 26.82	26 17.3	22 33.90	+ 7.45	+0 25.06	+12.03	-2.01	-28.10	23 26 58.32	53 5 55.0
23 27 23.0	9.3	27 48.24	27 30.3	15 35.40	+14.32	+0 25.06	+10.79	-2.03	-28.00	23 28 19.77	52 12 59.3
23 28 47.9	8.7	29 13.40	28 45.1	27 13.10	+22.23	+0 25.06	+11.76	-2.05	-28.10	23 29 44.92	53 1 30.4
23 30 10.4	7.6	30 35.72	30 7.5	43 3.20	+22.29	+0 25.06	+11.55	-2.06	-28.10	23 31 7.27	52 45 40.2
23 32 3.0	6.3	32 27.96	31 58.7	54 31.25	+23.74	+0 25.05	+10.33	-2.08	-27.90	23 32 59.55	51 34 12.7
23 33 47.4	8.9	34 12.12	33 37.4	14 20.25	+27.75	+0 25.06	+10.93	-2.11	-28.00	23 34 43.71	52 14 28.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
23 34 52.1	8.9	35 17.66	34 45.1	59 8.95	+25.92	+0 25.06	+11.22	-2.13	-28.00	23 35 49.25	52 29 38.0
23 36 4.0	6.0	36 29.00	35 55.9	1 14.45	+26.34	+0 25.06	+11.03	-2.14	-28.00	23 37 0.61	52 27 32.8
23 38 54.5	9.0	39 20.76	38 51.2	4 2.45	+23.52	+0 25.06	+11.18	-2.18	-28.00	23 39 52.40	52 24 42.2
23 40 47.6	9.0	41 14.92	40 47.9	52 13.95	+21.41	+0 25.07	+11.28	-2.20	-28.00	23 41 46.59	52 36 28.7
23 42 29.0	8.9	42 55.86	42 27.7	51 34.00	+22.35	+0 25.07	+11.25	-2.22	-28.00	23 43 27.54	52 37 9.6
23 44 44.5	9.0	45 10.38	44 39.5	58 3.05	+24.55	+0 25.07	+11.19	-2.25	-27.90	23 45 42.09	52 30 42.9
23 45 59.7	9.0	46 27.90	45 56.1	5 5.70	+25.34	+0 25.07	+10.78	-2.27	-27.90	23 46 59.62	52 23 40.6
23 47 32.4	7.7	48 0.92	47 27.6	40 38.55	+25.50	+0 25.07	+11.30	-2.29	-28.00	23 48 32.66	52 48 8.4
23 48 58.0	8.7	49 26.34	48 49.8	59 22.60	+29.02	+0 25.07	+11.20	-2.31	-27.90	23 49 58.08	52 29 27.8
23 50 30.2	9.0	50 59.00	50 22.9	35 46.65	+28.45	+0 25.07	+11.35	-2.33	-27.90	23 51 30.76	52 53 3.4
23 51 41.3	8.0	52 10.20	51 38.0	55 22.85	+25.57	+0 25.07	+11.00	-2.34	-27.90	23 52 41.98	52 33 24.0
23 55 54.2	9.0	56 22.52	55 52.4	38 8.55	+23.75	+0 25.08	+11.63	-2.40	-27.90	23 56 54.34	52 50 37.1
ZONE 198, NOVEMBER 23, 1872.											
23 37 41.5	8.6	38 5.74	37 30.7	15 35.10	+29.24	+0 27.22	+ 8.30	-2.09	-28.00	23 38 39.64	50 13 12.7
23 39 50.2	9.6	40 15.30	39 51.8	12 57.30	+19.21	+0 27.23	+ 9.91	-2.12	-28.10	23 40 49.21	51 15 42.0
23 40 43.5	9.0	41 8.36	40 52.1	16 22.65	+13.34	+0 27.23	+ 9.79	-2.13	-28.10	23 41 42.28	51 12 10.7
23 42 22.4	8.9	42 47.18	42 15.9	31 16.85	+25.19	+0 27.24	+10.50	-2.15	-28.20	23 43 21.11	51 57 29.0
23 43 46.2	8.8	44 11.20	44 13.6	56 31.75	- 1.95	+0 27.23	+10.18	-2.17	-28.10	23 44 45.14	51 31 46.8
23 46 19.1	8.0	46 44.06	46 18.7	14 7.40	+20.77	+0 27.23	+ 9.95	-2.20	-28.10	23 47 18.03	51 14 33.6
23 49 39.6	8.0	50 5.66	49 48.1	0 31.05	+14.32	+0 27.23	+ 9.94	-2.25	-28.10	23 50 39.65	51 28 3.6
23 51 33.4	8.8	51 59.32	51 32.8	20 56.50	+21.71	+0 27.23	+ 9.53	-2.27	-28.00	23 52 33.34	51 7 45.2
23 53 2.5	9.0	53 28.18	52 58.5	14 7.85	+24.28	+0 27.23	+ 9.89	-2.29	-28.00	23 54 2.20	51 14 36.8
23 54 19.7	8.8	54 46.02	54 21.4	57 27.90	+19.99	+0 27.23	+10.12	-2.30	-28.10	23 55 20.06	51 31 12.6
23 55 42.7	8.1	56 7.86	55 41.0	42 30.50	+21.74	+0 27.24	+10.46	-2.32	-28.10	23 56 41.92	51 46 12.1
23 57 4.7	8.8	57 30.30	57 14.3	20 32.60	+13.11	+0 27.23	+ 9.61	-2.34	-28.00	23 58 4.36	51 8 0.6
23 58 50.7	8.9	59 17.34	58 42.6	31 29.20	+27.93	+0 27.24	+10.43	-2.36	-28.10	23 59 51.43	51 57 19.6
0 0 8.3	7.0	0 35.10	0 6.6	24 4.85	+22.88	+0 27.24	+10.92	-2.39	-28.10	0 1 9.19	52 4 39.4
0 0 58.3	7.0	1 25.96	0 58.3	50 19.50	+22.45	+0 27.23	+10.11	-2.39	-28.00	0 2 0.06	51 38 23.6
0 2 12.8	9.0	2 39.74	2 12.4	8 43.90	+22.27	+0 27.23	+ 9.99	-2.40	-27.90	0 3 13.85	51 19 59.0
0 3 25.3	8.8	3 52.68	3 32.6	43 44.50	+16.25	+0 27.24	+10.62	-2.42	-28.00	0 4 26.81	51 44 52.9
0 5 12.7	8.9	5 40.54	5 8.8	47 44.50	+25.67	+0 27.24	+10.30	-2.44	-28.00	0 6 14.69	51 41 2.0
0 6 28.0	8.8	6 55.76	6 29.0	52 6.30	+21.74	+0 27.23	+10.27	-2.46	-27.90	0 7 29.91	51 36 36.3
0 7 53.2	9.0	8 21.20	7 49.1	8 18.50	+26.19	+0 27.23	+ 9.90	-2.47	-27.90	0 8 55.37	51 20 28.2
0 9 14.1	9.8	9 43.08	9 23.5	43 23.90	+15.84	+0 27.24	+10.60	-2.50	-27.90	0 10 17.26	51 45 13.1
0 10 30.5	7.8	11 0.08	10 28.5	45 34.35	+25.56	+0 27.24	+10.16	-2.51	-27.80	0 11 34.28	51 43 12.0
0 12 18.4	8.8	12 47.72	12 18.1	16 56.30	+24.20	+0 27.23	+ 9.74	-2.52	-27.80	0 13 21.93	50 11 48.3
0 14 41.3	8.3	15 10.94	14 43.1	57 11.30	+22.59	+0 27.23	+10.06	-2.56	-27.70	0 15 45.17	51 31 32.0
0 16 26.6	6.0	16 57.86	16 27.1	9 7.80	+25.14	+0 27.23	+ 9.95	-2.58	-27.70	0 17 32.11	51 19 38.0
0 18 31.9	8.3	19 0.52	18 29.3	53 29.60	+25.87	+0 27.22	+ 9.10	-2.60	-27.50	0 19 34.77	50 35 16.2
0 22 36.7	9.0	23 7.44	22 40.4	20 53.80	+22.12	+0 27.23	+ 9.54	-2.65	-27.50	0 23 41.75	51 7 48.6
0 25 8.3	9.1	25 39.56	25 10.3	28 32.35	+23.55	+0 27.24	+10.78	-2.70	-27.60	0 26 13.90	52 0 12.5
0 27 52.4	9.3	28 23.30	28 0.2	30 38.35	+19.00	+0 27.23	+ 9.38	-2.72	-27.40	0 28 57.65	50 58 0.7
0 29 26.8	8.9	29 58.70	29 32.2	54 58.60	+21.52	+0 27.23	+ 9.94	-2.75	-27.40	0 30 33.06	51 33 43.5
0 30 47.0	8.8	31 18.38	30 50.0	31 54.00	+22.86	+0 27.24	+10.59	-2.77	-27.40	0 31 52.77	51 56 50.0
0 32 1.2	8.0	32 32.92	32 2.8	17 12.80	+24.64	+0 27.23	+ 9.68	-2.77	-27.30	0 33 7.31	51 11 32.1
0 33 7.9	7.0	33 39.88	33 9.0	58 1.55	+25.11	+0 27.23	+10.07	-2.79	-27.30	0 34 14.28	51 30 44.2
0 34 51.0	8.7	35 22.90	34 59.2	15 9.30	+19.38	+0 27.23	+ 9.62	-2.81	-27.30	0 35 57.31	51 13 30.2
0 37 12.1	9.3	37 44.70	37 11.7	3 57.75	+26.87	+0 27.23	+10.02	-2.84	-27.20	0 38 19.14	51 24 49.6
0 39 2.4	8.7	39 34.50	39 13.8	30 20.95	+17.39	+0 27.22	+ 8.31	-2.83	-26.90	0 40 8.94	49 58 15.5

ZONE 199, NOVEMBER 27, 1872.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	s	s	"	h m s	° ' "
23 37 41.5	8.5	38 6.56	37 40.4	15 27.65	+21.89	+0 26.25	+ 8.47	-2.01	-28.40	23 38 39.57	50 13 12.9
23 39 50.2	9.5	40 16.12	39 50.9	13 0.33	+20.59	+0 26.26	+ 9.89	-2.03	-28.50	23 40 49.15	51 15 40.2
23 40 50.0	8.7	41 15.34	.....	.....	.....	+0 26.26	.....	-2.04	.....	23 41 48.38	.....
23 42 22.4	...	42 48.04	42 13.7	31 19.35	+27.60	+0 26.27	+10.45	-2.06	-28.60	23 43 21.09	51 57 28.8
23 43 46.2	8.4	44 12.16	43 52.7	56 48.75	+15.84	+0 26.26	+10.13	-2.08	-28.50	23 44 45.22	51 31 47.4
23 46 19.1	8.3	46 44.96	46 18.8	14 8.80	+21.42	+0 26.25	+ 9.96	-2.12	-28.50	23 47 18.03	51 14 32.8
23 48 15.3	6.3	48 41.70	48 12.6	26 23.15	+23.38	+0 26.26	+10.65	-2.14	-28.60	23 49 14.79	52 2 21.0
23 49 39.6	8.6	50 6.48	49 42.1	0 35.95	+19.85	+0 26.25	+ 9.91	-2.16	-28.50	23 50 39.58	51 28 4.1
23 51 33.4	8.5	52 0.16	51 35.1	20 54.55	+20.57	+0 26.25	+ 9.56	-2.18	-28.40	23 52 33.29	51 7 46.0
23 53 2.5	8.7	53 29.00	53 3.3	14 4.50	+21.01	+0 26.24	+ 9.97	-2.20	-28.40	23 54 2.12	51 14 36.9
23 54 19.7	8.9	54 46.96	54 25.6	57 25.85	+17.39	+0 26.24	+10.18	-2.22	-28.50	23 55 20.09	51 31 12.0
23 55 42.7	8.0	56 8.70	55 42.8	42 31.00	+20.93	+0 26.25	+10.48	-2.24	-28.50	23 56 41.85	51 46 10.7
23 57 4.7	9.0	57 31.12	57 5.6	20 39.65	+20.89	+0 26.24	+ 9.54	-2.26	-28.40	23 58 4.27	51 8 1.2
23 58 50.7	9.0	59 18.24	58 56.3	31 19.75	+17.63	+0 26.25	+10.63	-2.28	-28.60	23 59 51.42	51 57 18.7
0 0 8.3	7.0	0 36.02	0 4.5	24 7.85	+25.28	+0 26.25	+10.89	-2.30	-28.60	0 1 9.21	52 4 38.5
0 0 58.3	8.0	1 26.86	1 0.6	50 19.40	+21.32	+0 26.24	+10.16	-2.31	-28.50	0 2 0.05	51 38 22.4
0 2 12.8	7.3	2 40.60	2 25.6	8 34.25	+12.24	+0 26.24	+10.13	-2.32	-28.40	0 3 13.80	51 19 58.5
0 3 25.3	8.9	3 53.52	3 37.5	43 27.28	- 3.24	+0 26.25	+10.72	-2.34	-28.50	0 4 26.74	51 44 50.5
0 5 12.7	9.1	5 41.46	5 10.2	47 44.00	+25.34	+0 26.25	+10.34	-2.36	-28.40	0 6 14.70	51 41 2.1
0 6 28.0	8.9	6 56.78	6 28.1	52 8.15	+23.28	+0 26.23	+10.25	-2.38	-28.40	0 7 30.01	51 36 35.8
0 7 53.2	9.0	8 22.16	7 58.9	8 11.05	+19.01	+0 26.25	+10.04	-2.39	-28.30	0 8 55.43	51 20 28.5
0 9 14.1	10.0	9 44.00	8 58.4	43 45.10	+36.86	+0 26.24	+10.20	-2.42	-28.40	0 10 17.26	51 45 12.3
0 10 30.5	8.2	11 1.00	10 25.2	45 39.00	+28.96	+0 26.24	+10.10	-2.43	-28.40	0 11 34.28	51 43 10.4

ZONE 200, DECEMBER 3, 1872.

0 42 10.2	9.5	42 51.61	42 25.3	31 30.85	+22.10	+0 18.86	+ 8.21	-2.70	-28.10	0 43 17.88	49 57 8.8
0 42 13.8	8.0	42 54.28	42 40.4	31 30.85	+11.68	+0 18.86	+ 8.36	-2.70	-28.10	0 43 20.55	49 56 58.5
0 43 18.7	7.2	44 0.12	43 45.3	35 1.60	+12.19	+0 18.87	+ 9.22	-2.73	-28.20	0 44 26.42	50 53 28.9
0 44 51.7	8.8	45 33.50	45 18.7	16 29.10	+12.11	+0 18.86	+ 9.67	-2.75	-28.20	0 45 59.82	51 12 1.7
0 47 52.9	8.1	48 35.10	48 17.1	39 44.35	+14.53	+0 18.88	+10.65	-2.80	-28.20	0 49 1.48	51 48 49.7
0 49 33.0	8.0	50 15.20	49 48.7	1 1.65	+22.03	+0 18.85	+ 8.67	-2.80	-28.00	0 50 41.57	50 27 38.1
0 50 33.1	8.1	51 15.68	50 47.7	38 2.45	+22.59	+0 18.88	+10.42	-2.84	-28.20	0 51 42.08	51 50 39.3
0 51 56.1	7.9	52 38.22	52 15.7	0 43.25	+18.30	+0 18.87	+ 9.81	-2.85	-28.10	0 53 4.61	51 27 53.6
0 53 24.5	8.4	54 7.22	53 21.2	6 35.65	+38.31	+0 18.86	+ 8.24	-2.85	-27.90	0 54 33.59	50 22 19.7
0 55 56.3	8.5	56 38.44	56 20.7	55 28.45	+14.69	+0 18.86	+ 8.78	-2.89	-27.80	0 57 4.83	50 33 3.8
0 57 21.3	8.9	58 4.48	57 26.5	49 20.30	+31.46	+0 18.86	+ 8.98	-2.90	-27.80	0 58 30.83	50 39 28.8
0 59 24.1	8.7	0 7.80	59 42.8	30 11.85	+20.11	+0 18.88	+10.39	-2.97	-27.90	1 0 34.26	51 58 27.1
1 0 41.6	8.9	1 24.82	0 51.8	32 34.90	+26.57	+0 18.88	+10.40	-2.98	-27.90	1 1 51.30	51 56 10.5
1 2 1.3	6.9	2 45.08	2 19.9	7 51.55	+21.00	+0 18.86	+ 8.70	-2.96	-27.60	1 3 11.51	50 20 46.7
1 3 0.9	9.5	3 45.32	3 27.6	36 39.35	+14.59	+0 18.86	+ 9.28	-2.98	-27.60	1 4 11.78	50 51 53.0
1 3 42.9	8.5	4 27.08	4 4.1	36 59.90	+18.95	+0 18.86	+ 9.26	-2.99	-27.60	1 4 53.55	50 51 36.7
1 3 42.9	9.0	4 27.48	4 4.1	36 59.90	+19.38	+0 18.86	+ 9.26	-2.99	-27.60	1 4 53.95	50 51 37.2
1 6 33.6	9.0	7 17.66	6 51.1	44 39.55	+21.51	+0 18.88	+10.45	-3.05	-27.60	1 7 44.19	51 44 0.7
1 8 48.4	8.8	9 33.00	8 50.1	47 48.35	+34.72	+0 18.88	+ 9.88	-3.07	-27.50	1 9 59.55	51 41 4.4
1 10 35.9	9.1	11 21.36	11 0.7	19 49.30	+17.32	+0 18.85	+ 8.29	-3.08	-27.20	1 11 47.82	50 8 44.6
1 11 40.1	7.7	12 25.02	.....	.....	.....	+0 18.86	.....	-3.10	.....	1 12 51.55	.....
1 13 43.1	7.8	14 28.14	14 1.0	21 20.45	+22.21	+0 18.86	+ 9.44	-3.12	-27.30	1 14 54.69	51 7 19.2
1 15 26.5	7.7	16 10.00	15 44.7	57 24.65	+21.01	+0 18.86	+ 8.82	-3.13	-27.10	1 16 36.54	50 31 13.2
1 17 8.3	8.7	17 55.98	17 27.6	44 25.40	+22.97	+0 18.88	+10.43	-3.18	-27.20	1 18 22.60	51 44 15.8
1 18 45.3	8.0	19 31.28	18 56.0	19 11.70	+28.91	+0 18.86	+ 9.57	-3.18	-27.10	1 19 57.88	51 9 34.5

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R.A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
1 19 51.1	8.9	20 37.32	20 4.1	14 36.35	+27.14	+0 18.86	+ 9.71	-3.20	-27.00	1 21 3.92	51 14 8.2
1 21 40.8	8.9	22 27.72	21 58.9	1 46.50	+23.44	+0 18.87	+ 9.78	-3.23	-27.00	1 22 54.36	51 26 54.3
1 22 47.6	8.8	23 34.84	22 56.7	30 10.10	+30.65	+0 18.88	+10.18	-3.26	-27.00	1 24 1.51	51 58 38.2
1 25 5.3	9.1	25 52.80	25 31.0	26 56.30	+17.51	+0 18.88	+10.61	-3.29	-26.90	1 26 19.49	52 1 39.2
1 26 9.5	8.7	26 56.96	26 28.5	16 53.55	+23.32	+0 18.86	+ 9.54	-3.28	-26.80	1 27 23.61	51 11 46.7
1 27 58.5	8.7	28 45.60	28 16.5	51 23.75	+24.11	+0 18.86	+ 8.89	-3.28	-26.60	1 29 12.25	50 37 16.7
1 29 32.5	8.3	30 20.34	29 55.0	39 49.50	+20.42	+0 18.88	+10.18	-3.34	-26.70	1 30 47.06	51 48 48.2
1 30 46.3	7.0	31 33.62	31 5.1	27 56.75	+22.90	+0 18.88	+10.59	-3.36	-26.60	1 32 0.36	52 0 43.8
1 32 26.0	9.1	33 13.62	32 46.3	31 38.45	+21.97	+0 18.88	+10.44	-3.37	-26.60	1 33 40.38	51 57 0.9
1 33 32.1	8.8	34 22.26	33 47.6	27 15.50	+27.89	+0 18.88	+10.45	-3.40	-26.50	1 34 49.02	52 1 29.7
1 34 56.2	8.6	35 43.28	35 13.9	34 31.55	+23.69	+0 18.88	+10.59	-3.41	-26.50	1 36 10.05	51 54 9.5
1 36 11.4	9.3	37 0.64	36 34.4	40 30.05	+21.16	+0 18.88	+10.20	-3.42	-26.40	1 37 27.42	51 48 8.0
1 37 49.1	9.3	38 37.22	38 10.5	58 50.95	+22.17	+0 18.86	+ 8.91	-3.50	-26.20	1 39 3.83	50 29 46.8
1 41 21.7	9.2	42 11.60	41 46.6	34 24.00	+20.14	+0 18.88	+10.63	-3.49	-26.10	1 42 38.42	51 54 13.2
1 42 41.1	8.8	43 30.02	42 59.0	53 59.10	+25.70	+0 18.86	+ 9.01	-3.45	-25.80	1 43 56.78	50 34 42.2
1 44 2.0	8.7	44 50.82	44 18.7	25 45.10	+25.78	+0 18.88	+10.41	-3.52	-25.90	1 45 17.67	52 2 57.4
ZONE 201, DECEMBER 7, 1872.											
0 16 26.6	6.2	17 5.00	16 36.8	9 5.60	+23.02	+0 19.82	+10.06	-2.30	-29.20	0 17 32.12	51 19 36.4
0 18 31.9	8.8	19 7.74	18 26.3	53 36.95	+34.33	+0 19.82	+ 8.96	-2.32	-29.00	0 19 34.87	50 35 15.4
0 22 36.7	9.1	23 14.70	22 41.8	20 58.30	+26.96	+0 19.82	+ 9.51	-2.38	-29.10	0 23 41.87	51 7 47.1
0 25 8.3	9.4	25 46.92	25 17.0	28 32.40	+24.04	+0 19.84	+10.80	-2.42	-29.20	0 26 14.14	52 0 11.1
0 27 0.4	9.5	27 38.60	27 7.8	27 56.00	+25.31	+0 19.82	+ 9.56	-2.44	-29.00	0 28 5.80	51 0 47.7
0 29 26.8	9.2	30 5.94	29 19.7	55 11.80	+37.51	+0 19.83	+ 9.63	-2.48	-29.10	0 30 33.17	51 33 44.0
0 30 47.0	9.1	31 25.44	30 48.2	31 59.65	+29.94	+0 19.84	+10.51	-2.50	-29.10	0 31 52.70	51 56 49.4
0 32 1.2	8.7	32 40.04	32 14.9	17 6.85	+20.54	+0 19.82	+ 9.79	-2.51	-29.00	0 33 7.28	51 11 32.1
0 33 7.9	7.5	33 47.00	33 16.7	58 1.05	+24.62	+0 19.83	+10.14	-2.53	-29.00	0 34 14.26	51 30 42.3
0 34 51.0	8.8	35 30.02	34 53.7	15 17.60	+29.69	+0 19.82	+ 9.50	-2.55	-29.00	0 35 57.28	51 13 30.2
0 37 12.1	9.0	37 51.91	37 8.8	4 3.70	+35.10	+0 19.83	+ 9.86	-2.58	-29.00	0 38 19.21	51 24 49.7
0 39 2.4	8.4	39 41.72	38 54.9	30 40.40	+39.31	+0 19.81	+ 7.89	-2.59	-28.60	0 40 8.99	49 58 15.6
ZONE 202, DECEMBER 23, 1872.											
1 49 3.7	8.0	49 48.02	49 27.7	53 9.85	+16.15	+0 23.56	+11.49	-3.30	-28.40	1 50 19.91	52 28 1.1
1 50 44.9	8.7	51 31.72	51 21.1	42 15.10	+ 8.40	+0 23.56	+11.75	-3.33	-28.40	1 52 3.63	52 38 48.2
1 51 37.1	8.7	52 23.26	52 15.3	26 0.90	+ 6.30	+0 23.57	+11.98	-3.35	-28.40	1 52 55.20	52 55 0.4
1 52 50.8	7.9	53 35.52	53 19.4	19 42.20	+12.65	+0 23.56	+12.03	-3.37	-28.20	1 54 7.47	53 1 25.5
1 54 28.4	9.1	55 14.62	54 41.0	8 43.65	+26.88	+0 23.54	+11.05	-3.37	-28.10	1 55 46.51	52 12 37.2
1 55 35.5	8.9	56 20.72	55 51.5	59 58.30	+25.16	+0 23.51	+ 8.70	-3.32	-27.70	1 56 52.49	50 21 18.8
1 57 57.9	8.7	58 44.58	58 19.7	49 19.55	+20.23	+0 23.53	+10.44	-3.41	-27.80	1 59 16.42	51 31 53.9
1 59 5.3	9.1	59 52.46	59 23.7	3 26.30	+23.00	+0 23.53	+11.17	-3.44	-27.90	2 0 24.37	52 17 50.4
2 0 26.3	9.0	1 14.28	0 55.7	10 8.05	+14.89	+0 23.53	+10.98	-3.45	-27.80	2 1 46.20	52 11 0.3
2 1 50.1	9.3	2 38.34	2 22.1	40 35.10	+12.82	+0 23.54	+11.64	-3.49	-27.90	2 3 10.30	52 40 31.5
2 3 2.1	9.2	3 50.64	3 27.4	28 59.15	+18.29	+0 23.55	+12.03	-3.51	-27.80	2 4 22.63	52 52 13.3
2 4 11.3	8.9	4 58.54	4 49.6	48 48.00	+ 7.07	+0 23.54	+11.70	-3.51	-27.70	2 5 30.51	52 32 12.8
2 5 15.7	9.5	6 4.36	5 49.0	57 37.45	+12.27	+0 23.54	+11.43	-3.51	-27.60	2 6 36.34	52 23 28.2
2 6 55.1	7.5	7 43.04	7 17.3	12 53.25	+20.60	+0 23.53	+11.05	-3.53	-27.50	2 8 14.99	52 8 20.3
2 8 26.4	9.0	9 14.72	8 57.4	29 10.70	+13.64	+0 23.55	+12.09	-3.59	-27.60	2 9 46.72	52 51 56.6
2 9 30.0	9.2	10 19.34	10 18.3	17 15.30	+ 0.78	+0 23.55	+12.25	-3.61	-27.60	2 10 51.38	53 3 39.1
2 11 6.0	9.3	11 53.94	11 39.0	8 44.15	+11.92	+0 23.53	+11.30	-3.60	-27.30	2 12 25.91	52 12 20.6
2 11 58.2	9.0	12 46.76	12 39.8	11 9.30	+ 5.61	+0 23.53	+11.11	-3.60	-27.20	2 13 18.74	52 9 48.9

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
2 13 50.2	8.0	14 38.26	14 25.6	14 15.45	+10.18	+0 23.52	+11.23	-3.63	-27.10	2 15 10.23	52 6 47.3
2 15 18.6	8.7	16 10.26	15 59.7	18 46.45	+ 8.32	+0 23.54	+12.32	-3.69	-27.30	2 16 42.32	53 2 15.0
2 17 27.8	8.9	18 16.36	17 49.9	25 3.60	+20.86	+0 23.54	+11.78	-3.71	-27.10	2 18 48.43	52 56 9.8
2 18 33.3	8.0	19 22.56	19 17.8	50 31.35	+ 3.81	+0 23.53	+11.46	-3.71	-27.00	2 19 54.59	52 30 24.6
2 20 55.7	...	21 44.96	21 38.8	44 6.05	+ 4.91	+0 23.52	+11.82	-3.74	-26.80	2 22 17.01	52 36 51.2
2 24 13.0	9.1	25 2.36	.....	.....	.....	+0 23.51	.....	-3.77	.....	2 25 34.39	.....
ZONE 203, DECEMBER 30, 1872.											
1 54 28.4	8.7	55 13.46	54 52.3	8 31.30	+16.96	+0 24.63	+11.63	-3.23	-28.70	1 55 46.58	52 12 38.3
2 6 55.1	7.7	7 41.76	7 24.2	12 46.15	+14.11	+0 24.64	+11.54	-3.40	-28.20	2 8 14.95	52 8 19.4
2 8 26.4	8.8	9 13.40	8 57.2	29 10.10	+12.77	+0 24.66	+12.53	-3.45	-28.30	2 9 46.65	52 51 54.8
2 9 30.0	9.0	10 18.24	10 10.7	17 19.00	+ 5.88	+0 24.66	+12.69	-3.48	-28.20	2 10 51.52	53 3 39.1
2 11 6.0	8.8	11 52.40	11 33.1	8 48.55	+15.45	+0 24.64	+11.68	-3.47	-28.00	2 12 25.61	52 12 18.1
2 13 50.2	8.3	14 37.06	14 17.1	14 20.70	+16.04	+0 24.65	+11.59	-3.50	-27.90	2 15 10.29	52 6 46.1
2 15 18.6	8.9	16 7.88	15 42.6	18 59.15	+19.87	+0 25.67	+12.57	-3.56	-28.00	2 16 42.20	53 2 12.1
2 17 27.8	8.5	18 15.16	17 41.3	25 9.60	+26.68	+0 24.67	+12.10	-3.58	-27.90	2 18 48.49	52 56 7.8
2 18 33.3	7.8	19 21.24	19 8.9	50 37.55	+ 9.77	+0 24.66	+11.86	-3.59	-27.70	2 19 54.52	52 30 22.8
2 19 48.9	8.7	20 37.22	20 11.5	51 6.70	+20.43	+0 24.66	+11.75	-3.60	-27.60	2 21 10.51	52 30 4.1
2 20 55.7	9.1	21 43.64	21 18.5	44 22.40	+19.90	+0 24.66	+12.10	-3.62	-27.60	2 22 16.95	52 36 48.0
2 20 55.7	9.0	21 43.90	21 21.4	44 22.40	+17.84	+0 24.66	+12.14	-3.62	-27.60	2 22 17.21	52 36 46.0
2 22 0.6	8.5	22 47.62	23 29.4	3 34.90	-33.38	+0 24.65	+11.29	-3.59	-27.60	2 23 20.93	52 16 41.3
2 24 13.0	8.7	25 1.00	24 38.5	4 24.60	+17.97	+0 24.65	+11.68	-3.59	-27.60	2 25 34.35	52 16 43.0
2 29 54.8	9.3	30 43.74	30 17.1	54 15.45	+21.17	+0 24.68	+11.87	-3.71	-27.10	2 31 17.12	52 26 55.1
2 31 15.8	9.1	32 3.18	32 2.3	11 8.35	+ 0.72	+0 24.66	+11.57	-3.75	-26.90	2 32 36.49	52 9 41.4
2 32 49.1	6.0	33 38.44	33 12.7	21 41.00	+20.20	+0 24.68	+12.46	-3.80	-26.90	2 34 11.85	52 59 28.9
2 36 11.5	8.4	37 0.34	36 29.4	43 12.60	+24.48	+0 24.67	+12.14	-3.84	-26.70	2 37 33.72	52 38 0.9
2 37 49.4	9.8	38 39.58	38 31.7	55 19.40	+ 6.29	+0 24.67	+11.82	-3.86	-26.50	2 39 12.94	52 25 35.5
2 39 8.0	8.4	39 57.16	39 40.9	50 36.75	+12.95	+0 24.67	+11.90	-3.87	-26.70	2 40 30.54	52 30 24.5
2 41 19.6	9.0	42 7.82	41 53.6	37 39.85	+11.23	+0 24.69	+12.31	-3.91	-26.60	2 42 41.25	52 43 19.8
2 42 37.3	8.4	43 27.18	43 10.0	52 9.10	+13.68	+0 24.68	+11.96	-3.92	-26.40	2 44 0.58	52 28 52.6
2 43 59.9	5.0	44 50.92	44 26.7	6 9.90	+19.35	+0 24.67	+11.52	-3.92	-26.30	2 45 24.30	52 14 56.9
ZONE 204, JANUARY 1, 1873.											
1 30 46.3	8.3	31 26.46	31 18.0	20 18.30	+ 6.83	+0 25.66	+11.03	+0.91	-11.00	1 32 0.51	52 0 43.0
1 31 21.6	8.8	32 2.57	31 26.3	26 53.15	-19.17	+0 25.66	+10.70	+0.90	-11.00	1 32 36.61	51 53 41.7
1 33 32.1	9.1	34 14.86	33 55.8	19 42.45	+15.35	+0 25.66	+11.18	+0.88	-11.10	1 34 48.92	52 1 27.2
1 34 56.2	8.4	35 35.96	35 25.8	26 53.70	+ 8.21	+0 25.66	+10.96	+0.87	-11.00	1 36 10.02	51 54 8.6
1 36 11.4	9.2	36 53.36	36 39.4	32 57.85	+11.30	+0 25.66	+10.91	+0.86	-11.00	1 37 27.42	51 48 7.4
1 38 10.3	8.4	38 52.04	38 34.9	50 44.60	+14.20	+0 25.63	+ 9.23	+0.84	-10.70	1 39 26.02	50 30 22.0
1 44 2.0	9.2	44 43.66	44 39.7	18 1.00	+ 3.21	+0 25.66	+11.23	+0.80	-11.20	1 45 17.78	52 2 55.7
1 49 3.7	7.8	49 45.66	49 24.2	53 10.50	+17.10	+0 25.68	+11.60	+0.76	-11.30	1 50 19.86	52 27 59.9
1 50 44.9	8.5	51 29.28	51 4.1	42 26.20	+19.96	+0 25.68	+11.73	+0.75	-11.30	1 52 3.50	52 38 47.1
1 51 37.1	7.8	52 21.02	52 8.6	26 4.20	+ 9.76	+0 25.70	+12.08	+0.74	-11.40	1 52 55.28	52 54 59.1
1 52 50.8	7.9	53 33.18	53 9.1	19 49.55	+18.89	+0 25.70	+12.29	+0.73	-11.50	1 54 7.45	53 1 22.9
1 54 28.4	9.0	55 12.16	54 50.5	8 32.05	+17.36	+0 25.67	+11.34	+0.72	-11.30	1 55 46.36	52 12 37.9
1 55 35.5	8.8	56 18.24	55 56.2	59 50.95	+18.33	+0 25.64	+ 9.22	+0.70	-10.80	1 56 52.30	50 21 18.3
1 57 57.9	8.4	58 42.22	58 16.2	49 20.00	+21.12	+0 25.66	+10.51	+0.69	-11.10	1 59 16.39	51 31 52.8
1 59 5.3	9.3	59 50.22	59 29.5	3 18.95	+16.53	+0 25.67	+11.43	+0.68	-11.30	2 0 24.45	52 17 49.9
2 0 26.3	8.9	1 11.90	0 52.7	10 8.00	+15.37	+0 25.67	+11.16	+0.67	-11.30	2 1 46.13	52 10 59.3
2 1 50.1	9.4	2 36.06	2 28.5	40 28.45	+ 6.02	+0 25.68	+11.81	+0.66	-11.40	2 3 10.34	52 40 29.9

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
2 3 2.1	9.2	3 48.24	3 34.9	28 48.00	+10.48	+0 25.70	+12.17	+0.65	-11.50	2 4 22.56	52 52 15.0
2 6 55.1	7.5	7 40.70	7 16.3	12 50.90	+19.56	+0 25.67	+11.20	+0.62	-11.30	2 8 14.96	52 8 20.0
2 8 26.4	8.8	9 12.24	8 54.6	29 10.85	+13.87	+0 25.70	+12.15	+0.61	-11.50	2 9 46.58	52 51 55.0
2 9 30.0	8.8	10 17.02	9 57.0	17 29.60	+15.69	+0 25.70	+12.27	+0.60	-11.50	2 10 51.39	53 3 38.1
2 11 6.0	8.9	11 51.40	11 25.6	8 52.60	+20.65	+0 25.67	+11.35	+0.58	-11.30	2 12 25.68	52 12 19.2
2 11 58.2	8.8	12 44.18	12 39.1	11 5.50	+ 4.08	+0 25.67	+11.27	+0.58	-11.30	2 13 18.46	52 9 49.6
2 13 50.2	8.0	14 35.98	14 17.6	14 18.75	+14.75	+0 25.67	+11.30	+0.56	-11.30	2 15 10.26	52 6 46.8
2 17 27.8	8.8	18 14.02	17 39.5	25 10.20	+27.15	+0 25.70	+11.82	+0.53	-11.50	2 18 48.41	52 56 7.7
2 18 33.3	...	19 20.18	19 8.4	50 37.30	+ 9.38	+0 25.68	+11.63	+0.52	-11.40	2 19 54.52	52 30 22.7
2 19 48.9	8.7	20 36.12	20 20.7	50 58.35	+12.24	+0 25.68	+11.62	+0.51	-11.40	2 21 10.47	52 30 4.3
2 20 55.7	...	21 42.46	21 25.3	44 14.65	+13.64	+0 25.68	+11.88	+0.50	-11.40	2 22 16.82	52 36 49.6
2 20 55.7	...	21 42.76	21 27.7	44 14.65	+11.97	+0 25.68	+11.90	+0.50	-11.40	2 22 17.12	52 36 47.9
2 22 0.6	...	22 46.52	23 2.0	3 55.45	-12.38	+0 25.69	+11.47	+0.50	-11.40	2 23 20.88	52 16 42.0
2 27 47.9	9.0	28 35.07	28 50.2	4 34.40	-12.06	+0 25.69	+11.54	+0.45	-11.40	2 29 9.45	52 16 3.1
2 29 54.8	...	30 42.52	30 20.5	54 11.50	+17.51	+0 25.69	+11.77	+0.44	-11.40	2 31 16.93	52 26 55.6
ZONE 205, JANUARY 4, 1873.											
2 33 44.1	9.5	34 30.60	34 9.6	17 14.20	+17.60	+0 26.63	+ 8.50	+0.46	-11.05	2 35 5.83	50 3 48.8
2 34 19.9	8.9	35 6.36	34 59.8	39 22.25	+ 5.46	+0 26.63	+ 9.42	+0.46	-11.20	2 35 41.64	50 41 29.3
2 35 26.8	8.8	36 14.60	35 57.7	17 43.00	+13.87	+0 26.65	+ 9.69	+0.45	-11.30	2 36 49.93	51 3 17.0
2 38 0.0	7.8	38 47.26	38 31.0	19 25.95	+13.39	+0 26.65	+ 9.75	+0.43	-11.30	2 39 22.60	51 1 33.4
2 39 20.7	8.8	40 9.14	40 4.2	13 34.95	+ 4.02	+0 26.65	+ 9.88	+0.42	-11.30	2 40 44.49	51 7 15.0
2 40 20.4	8.9	41 8.38	40 53.1	55 11.80	+12.18	+0 26.67	+11.13	+0.41	-11.60	2 41 43.86	52 25 47.1
2 43 46.0	9.8	44 34.60	44 29.7	14 59.50	+ 4.02	+0 26.65	+ 9.69	+0.38	-11.30	2 45 9.96	51 5 49.7
2 44 33.4	8.8	45 20.82	45 32.5	20 1.25	- 9.19	+0 26.67	+11.80	+0.37	-11.75	2 45 56.35	53 0 36.3
2 48 32.3	9.4	49 22.42	49 27.5	37 18.05	- 4.03	+0 26.68	+11.64	+0.34	-11.65	2 49 57.96	52 43 24.2
2 50 33.7	5.5	51 22.94	50 56.2	29 55.95	+21.54	+0 26.67	+10.39	+0.33	-11.45	2 51 58.41	51 51 10.5
2 50 33.7	8.2	51 24.30	50 57.1	29 55.95	+21.94	+0 26.67	+10.39	+0.33	-11.45	2 51 59.77	51 51 10.9
2 52 56.5	9.0	53 45.08	53 11.7	25 20.90	+27.49	+0 26.65	+ 9.27	+0.31	-11.25	2 54 20.45	50 55 50.3
2 54 20.0	8.8	55 9.20	54 37.6	28 43.55	+26.03	+0 26.65	+ 9.37	+0.30	-11.25	2 55 44.58	50 52 26.2
2 56 2.5	9.2	56 51.94	56 24.3	50 12.00	+22.92	+0 26.63	+ 8.84	+0.29	-11.10	2 57 27.27	50 30 54.0
2 56 2.5	9.5	56 52.94	56 26.3	50 12.00	+22.09	+0 26.63	+ 8.85	+0.29	-11.10	2 57 28.27	50 30 53.2
2 57 23.7	8.5	58 12.58	58 50.8	38 15.65	-30.90	+0 26.66	+10.21	+0.27	-11.35	2 58 48.03	51 41 57.5
2 59 47.5	8.6	0 41.06	0 10.0	54 56.40	+24.76	+0 26.68	+10.97	+0.25	-11.50	3 1 16.61	52 26 12.7
3 1 38.4	8.3	2 29.18	2 9.7	35 11.10	+15.41	+0 26.69	+11.49	+0.23	-11.60	3 3 4.76	52 45 48.8
.....	8.2	4 14.52	3 52.2	2 10.20	+18.20	+0 26.66	+ 9.93	+0.23	-11.25	3 4 54.24	51 19 5.0
3 6 49.9	9.0	7 39.15	8 13.7	36 41.00	-28.50	+0 26.67	+ 9.08	+0.20	-11.05	3 8 14.57	50 43 32.5
3 8 4.0	8.3	8 53.34	9 7.5	14 46.10	-11.89	+0 26.64	+ 8.53	+0.20	-10.95	3 9 28.68	50 5 43.4
3 9 42.4	7.3	10 32.40	10 6.9	50 19.10	+21.17	+0 26.64	+ 8.90	+0.19	-11.00	3 11 7.78	50 30 43.6
3 29 46.4	9.0	30 40.00	30 12.7	25 33.60	+21.98	+0 26.68	+10.53	+0.02	-11.05	3 31 15.56	51 55 28.8
3 30 48.3	8.3	31 40.78	31 29.0	15 2.00	+ 9.68	+0 26.66	+ 9.64	+0.02	-10.90	3 32 16.25	51 5 47.2
3 37 58.8	8.2	38 52.34	38 31.6	46 35.90	+16.80	+0 26.67	+10.25	-0.03	-10.90	3 39 27.88	51 34 20.0
3 42 9.0	8.5	43 3.02	42 29.9	28 25.80	+26.68	+0 26.68	+10.51	-0.07	-10.85	3 43 43.08	51 52 50.9
3 43 54.0	7.9	44 48.00	44 21.2	17 56.15	+22.54	+0 26.69	+10.78	-0.08	-10.85	3 45 23.61	52 3 5.2
3 44 49.8	9.0	45 43.58	46 8.4	18 28.55	-19.92	+0 26.69	+10.80	-0.09	-10.85	3 46 19.18	52 1 50.2
3 45 51.3	5.0	46 43.84	46 36.3	0 51.50	+ 6.25	+0 26.65	+ 8.88	-0.07	-10.50	3 47 19.26	50 19 51.7
3 47 18.2	8.6	48 12.06	47 55.8	58 45.40	+13.28	+0 26.67	+10.16	-0.10	-10.70	3 48 47.59	51 22 5.7
3 48 0.3	7.7	48 53.70	49 14.6	12 9.90	-17.12	+0 26.67	+ 9.77	-0.10	-10.60	3 49 29.21	51 8 10.4
3 50 4.7	8.5	50 59.96	50 35.4	32 28.90	+19.86	+0 26.68	+10.52	-0.12	-10.70	3 51 35.54	51 48 28.8
3 51 43.5	8.8	52 37.52	52 17.2	33 16.45	+16.39	+0 26.68	+10.61	-0.13	-10.65	3 53 13.10	51 47 37.7

ZONE 206, JANUARY 6, 1873.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
2 33 44.1	9.1	34 30.24	34 9.4	17 14.95	+17.43	+0 27.08	+ 8.58	+0.50	-11.20	2 35 5.96	50 3 47.8
2 34 19.9	8.9	35 5.88	34 58.9	39 22.60	+ 5.79	+0 27.08	+ 9.53	+0.49	-11.35	2 35 41.64	50 41 29.2
2 35 26.8	8.9	36 14.06	36 2.9	17 37.55	+ 9.19	+0 27.09	+ 9.86	+0.48	-11.45	2 36 49.86	51 3 17.8
2 38 0.0	8.0	38 46.84	38 24.3	19 31.00	+18.48	+0 27.09	+ 9.82	+0.46	-11.45	2 39 22.65	51 1 33.2
2 38 21.0	9.3	39 7.84	39 20.6	19 30.25	- 8.35	+0 27.08	+ 9.88	+0.45	-11.45	2 39 43.63	51 1 7.3
2 39 20.7	8.5	40 8.58	40 4.0	13 35.05	+ 3.77	+0 27.09	+10.02	+0.45	-11.45	2 40 44.40	51 7 14.6
2 40 20.4	8.9	41 7.84	41 0.0	55 5.55	+ 6.21	+0 27.12	+11.31	+0.45	-11.80	2 41 43.81	52 25 47.4
2 43 46.0	9.8	44 34.04	44 10.9	15 16.10	+18.94	+0 27.09	+ 9.67	+0.42	-11.45	2 45 9.88	51 5 47.9
2 44 33.4	8.5	45 20.42	45 0.1	20 25.05	+15.58	+0 27.12	+11.90	+0.41	-11.90	2 45 56.44	53 0 37.2
2 47 5.1	8.0	47 53.72	47 13.1	21 37.35	+32.66	+0 27.11	+10.50	+0.39	-11.70	2 48 29.66	51 59 40.5
2 47 6.6	9.0	47 55.44	48 40.7	21 37.35	-36.44	+0 27.11	+10.46	+0.39	-11.70	2 48 31.38	51 58 31.4
2 48 32.3	9.8	49 21.66	49 23.1	37 19.60	- 1.19	+0 27.12	+11.77	+0.38	-11.85	2 49 57.68	52 43 25.4
2 50 33.7	5.3	51 22.42	51 5.3	29 49.00	+13.80	+0 27.11	+10.65	+0.36	-11.60	2 51 58.36	51 51 9.9
2 50 33.7	8.5	51 23.72	51 5.8	29 49.00	+14.44	+0 27.11	+10.64	+0.36	-11.60	2 51 59.66	51 51 10.5
2 52 56.5	9.1	53 44.62	53 19.2	25 14.10	+20.90	+0 27.09	+ 9.47	+0.34	-11.40	2 54 20.46	50 55 50.6
2 54 20.0	8.9	55 8.58	54 59.7	28 24.40	+ 7.33	+0 27.09	+ 9.69	+0.33	-11.40	2 55 44.43	50 52 26.8
2 56 2.5	9.3	56 51.20	56 33.2	50 5.25	+14.94	+0 27.08	+ 9.04	+0.31	-11.25	2 57 27.00	50 30 52.8
2 56 2.5	9.4	56 52.44	56 35.4	50 5.25	+14.11	+0 27.08	+ 9.05	+0.31	-11.25	2 57 28.24	50 30 52.0
2 57 23.7	8.2	58 12.18	59 35.4	37 36.75	-67.28	+0 27.10	+ 8.80	+0.31	-11.55	2 58 48.11	51 41 58.4
2 57 41.2	5.0	58 30.12	57 40.8	37 36.75	+39.88	+0 27.10	+10.02	+0.31	-11.55	2 59 6.06	51 43 46.8
2 59 47.5	8.6	0 40.60	0 27.5	54 43.45	+10.43	+0 27.12	+11.52	+0.29	-11.70	3 1 16.63	52 26 11.7
3 1 38.4	8.4	2 28.74	2 7.3	35 12.00	+16.91	+0 27.11	+11.58	+0.27	-11.80	3 3 4.78	52 45 49.3
3 3 24.7	7.8	4 14.20	3 53.1	2 9.25	+17.22	+0 27.08	+10.04	+0.26	-11.45	3 4 54.37	51 19 4.9
3 8 4.0	8.3	8 52.84	8 28.9	15 18.15	+20.02	+0 27.07	+ 8.51	+0.23	-11.15	3 9 28.64	50 5 43.1
3 9 42.4	7.8	10 31.96	10 12.9	50 13.00	+15.86	+0 27.07	+ 9.04	+0.22	-11.20	3 11 7.80	50 30 44.3
3 29 46.4	9.2	30 39.50	30 21.1	25 25.05	+14.81	+0 27.10	+10.71	+0.05	-11.30	3 31 15.51	51 55 30.1
3 30 48.3	8.6	31 40.52	31 27.7	15 2.90	+10.50	+0 27.08	+ 9.77	+0.05	-11.15	3 32 16.44	51 5 47.0
3 42 9.0	8.3	43 2.64	43 1.0	28 1.15	+ 1.29	+0 27.10	+10.88	-0.04	-11.15	3 43 43.15	51 52 50.3
3 43 54.0	8.0	44 47.60	44 31.2	17 46.10	+13.16	+0 27.10	+11.00	-0.05	-11.15	3 45 23.65	52 3 5.8
3 44 49.8	9.2	45 43.14	45 50.1	18 42.60	- 5.62	+0 27.10	+11.06	-0.06	-11.10	3 46 19.18	52 1 50.5
3 45 51.3	5.5	46 43.34	46 34.1	0 53.15	+ 7.67	+0 27.07	+ 8.95	-0.05	-10.75	3 47 19.20	50 19 51.3
3 47 18.2	8.8	48 11.58	47 56.7	58 44.45	+12.14	+0 27.08	+10.26	-0.07	-11.00	3 48 47.55	51 22 5.3
3 48 0.3	8.0	48 53.18	48 45.8	12 33.65	+ 6.06	+0 27.08	+ 9.98	-0.08	-10.90	3 49 29.12	51 8 9.7
3 50 4.7	8.5	50 59.42	50 36.4	32 27.55	+18.57	+0 27.10	+10.62	-0.10	-11.00	3 51 35.44	51 48 28.6
3 51 43.5	9.0	52 37.00	52 10.0	33 22.60	+21.80	+0 27.10	+10.61	-0.11	-10.95	3 53 13.02	51 47 36.6

ZONE 207, JANUARY 7, 1873.

2 46 43.8	9.1	47 30.30	47 9.6	3 41.00	+17.27	+0 27.40	+ 9.12	+0.41	-11.35	2 48 6.41	50 17 20.8
2 52 44.0	9.6	53 30.52	53 15.1	3 26.15	+12.85	+0 27.40	+ 9.17	+0.37	-11.35	2 54 6.65	50 17 30.6
2 54 20.4	9.0	55 7.08	54 37.5	13 28.50	+24.77	+0 27.40	+ 8.81	+0.35	-11.30	2 55 43.19	50 7 39.7
2 55 34.6	9.5	56 24.42	56 5.7	25 4.05	+14.72	+0 27.45	+12.05	+0.33	-11.95	2 57 0.81	52 55 56.5
2 59 47.5	9.0	0 40.20	0 52.9	54 20.95	-10.13	+0 27.43	+11.67	+0.30	-11.80	3 1 16.54	52 26 14.0
3 6 49.9	9.2	7 38.54	7 48.3	37 1.90	- 8.10	+0 27.39	+ 9.64	+0.25	-11.40	3 8 14.72	50 43 32.6
3 8 27.2	9.3	9 19.52	9 4.8	1 10.35	+11.65	+0 27.42	+11.46	+0.23	-11.75	3 9 55.87	52 19 45.2
3 9 39.8	9.0	10 32.78	10 9.8	41 25.50	+18.21	+0 27.43	+11.77	+0.22	-11.80	3 11 9.17	52 39 36.6
3 11 4.6	8.8	11 54.14	11 45.7	19 6.50	+ 6.90	+0 27.40	+10.12	+0.22	-11.45	3 12 30.36	51 1 42.9
3 13 11.0	8.8	14 0.22	13 42.4	7 58.50	+14.87	+0 27.39	+ 9.05	+0.21	-11.25	3 14 36.37	50 12 57.7
3 15 32.7	7.7	16 22.30	16 1.4	22 39.05	+16.81	+0 27.40	+ 9.89	+0.19	-11.40	3 16 58.53	50 58 19.5
3 16 44.6	9.5	17 35.92	17 35.0	54 21.40	+ 0.75	+0 27.39	+ 9.46	+0.18	-11.25	3 18 12.10	50 26 20.6
3 18 14.1	9.2	19 4.20	18 57.0	20 50.00	+ 5.91	+0 27.39	+ 8.72	+0.17	-11.15	3 19 40.34	49 59 56.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
3 19 39.0	9.0	20 29.32	20 2.6	26 8.45	+21.98	+0 27.40	+ 9.69	+0.15	-11.35	3 21 5.55	50 54 54.5
3 20 39.4	7.8	21 29.02	21 13.8	17 51.90	+12.74	+0 27.39	+ 8.93	+0.15	-11.10	3 22 5.17	50 3 1.2
3 21 47.0	9.6	22 38.14	22 29.9	21 9.15	+ 6.59	+0 27.40	+ 9.95	+0.14	-11.35	3 23 14.38	50 59 38.4
3 25 37.1	7.5	26 30.34	27 0.9	50 19.60	+23.28	+0 27.43	+11.47	+0.10	-11.60	3 27 6.75	52 30 45.4
3 27 32.7	9.0	28 24.46	28 14.0	9 44.80	+ 8.41	+0 27.42	+11.31	+0.08	-11.50	3 29 0.83	52 11 5.1
3 29 51.3	9.3	30 45.22	30 35.1	58 26.95	+ 8.23	+0 27.41	+10.60	+0.07	-11.30	3 31 21.51	51 22 21.8
3 30 50.6	8.6	31 40.62	31 10.0	56 17.80	+25.46	+0 27.39	+ 9.04	+0.07	-11.10	3 32 16.81	50 24 46.7
3 32 35.5	9.8	33 27.22	33 5.6	55 25.35	+17.88	+0 27.39	+ 9.15	+0.06	-11.05	3 34 3.42	50 25 31.5
3 33 38.0	9.6	34 25.08	34 30.6	26 55.35	- 4.71	+0 27.38	+ 8.67	+0.06	-10.95	3 35 1.22	49 53 38.4
3 34 18.5	9.8	35 9.55	35 39.6	16 13.50	-25.22	+0 27.39	+ 8.65	+0.05	-10.95	3 35 45.72	50 3 59.6
3 35 58.4	9.7	36 50.22	36 32.6	32 23.35	+14.52	+0 27.40	+ 9.73	+0.03	-11.10	3 37 26.46	50 48 30.2
3 37 55.5	6.9	38 46.74	38 23.0	21 43.80	+19.48	+0 27.39	+ 9.87	+0.02	-11.15	3 39 22.99	50 59 14.6
3 38 59.8	9.0	39 52.82	39 41.0	32 12.50	+ 9.74	+0 27.39	+ 9.78	+0.01	-11.05	3 40 29.05	50 48 35.9
ZONE 208, JANUARY 9, 1873.											
2 47 2.4	9.2	47 48.20	47 29.7	59 29.65	+15.41	+0 27.82	+ 8.94	+0.45	-11.50	2 48 24.78	50 21 29.7
2 52 44.0	9.4	53 30.18	53 12.6	3 30.40	+14.68	+0 27.82	+ 8.70	+0.40	-11.50	2 54 6.76	50 17 27.3
2 54 20.4	9.2	55 6.76	54 43.4	13 24.20	+19.59	+0 27.82	+ 8.60	+0.39	-11.45	2 55 43.33	50 7 38.2
2 55 34.6	9.3	56 23.92	56 10.4	25 1.10	+10.63	+0 27.86	+11.74	+0.38	-12.10	2 57 0.77	52 55 54.6
3 0 15.7	9.2	1 3.64	0 50.5	57 28.20	+10.44	+0 27.85	+11.37	+0.34	-12.00	3 1 40.45	52 23 26.5
3 2 9.0	8.2	2 59.38	2 36.4	56 38.35	+18.32	+0 27.86	+11.14	+0.32	-12.00	3 3 36.20	52 24 23.8
3 5 49.3	8.9	6 38.42	6 37.0	22 57.25	+ 1.15	+0 27.83	+ 9.72	+0.30	-11.65	3 7 15.10	50 57 46.2
3 6 49.9	9.0	7 37.88	7 30.6	37 17.00	+ 6.03	+0 27.83	+ 9.37	+0.29	-11.60	3 8 14.54	50 43 30.9
3 8 27.2	9.0	9 19.08	9 3.2	1 11.20	+12.69	+0 27.85	+11.10	+0.26	-11.95	3 9 55.89	52 19 44.5
3 9 39.8	9.1	10 32.32	10 15.5	41 21.00	+13.30	+0 27.86	+11.47	+0.26	-12.00	3 11 9.18	52 39 35.4
3 11 4.6	8.8	11 53.74	11 41.1	19 11.10	+10.35	+0 27.83	+ 8.71	+0.25	-11.65	3 12 30.42	51 1 39.8
3 25 37.1	7.6	26 30.10	26 17.3	50 8.50	+10.17	+0 27.86	+11.26	+0.13	-11.85	3 27 6.97	52 30 42.6
3 27 32.7	9.0	28 24.10	28 7.6	9 49.90	+13.21	+0 27.85	+10.91	+0.11	-11.75	3 29 0.93	52 11 3.8
3 29 51.3	9.6	30 45.00	30 28.6	58 31.60	+13.36	+0 27.85	+10.16	+0.10	-11.55	3 31 21.76	51 22 21.4
3 30 50.6	8.1	31 40.32	31 12.0	56 17.65	+23.55	+0 27.83	+ 8.77	+0.10	-11.35	3 32 16.98	50 24 44.2
3 32 35.5	9.8	33 27.00	33 7.1	55 26.75	+16.55	+0 27.83	+ 8.84	+0.09	-11.30	3 34 3.67	50 25 27.9
3 33 38.0	9.1	34 24.74	34 45.3	26 43.65	-17.32	+0 27.82	+ 8.30	+0.08	-11.20	3 35 1.34	49 53 36.6
3 36 3.6	9.1	36 55.40	36 52.7	35 3.65	+ 2.23	+0 27.84	+ 9.32	+0.06	-11.40	3 37 32.11	50 45 36.6
3 37 55.5	7.5	38 46.24	38 42.2	21 26.80	+ 3.22	+0 27.84	+ 9.55	+0.04	-11.40	3 39 22.96	50 59 14.4
3 38 59.8	9.0	39 52.40	39 30.4	32 19.40	+18.15	+0 27.84	+ 9.36	+0.04	-11.35	3 40 29.11	50 48 36.4
3 40 26.0	9.0	41 18.62	41 0.0	37 5.65	+15.37	+0 27.84	+ 9.29	+0.02	-11.30	3 41 55.32	50 43 47.2
3 42 14.0	7.5	43 5.34	42 46.4	40 30.40	+15.64	+0 27.84	+ 9.17	+0.01	-11.25	3 43 42.04	50 40 22.4
3 43 32.4	9.0	44 23.64	44 10.1	17 53.20	+11.32	+0 27.83	+ 8.56	+0.01	-11.10	3 45 0.28	50 2 54.6
3 44 44.3	6.0	45 36.76	45 24.7	29 42.75	+ 9.76	+0 27.86	+ 9.71	-0.02	-11.45	3 46 13.58	51 51 4.1
3 45 51.3	5.0	46 42.62	46 27.3	0 57.45	+12.75	+0 27.83	+ 8.81	-0.01	-11.15	3 47 19.28	50 19 51.6
3 47 2.6	7.8	47 55.68	47 43.1	35 2.10	+10.18	+0 27.85	+10.43	-0.04	-11.45	3 48 32.48	51 45 45.6
3 48 0.3	7.8	48 52.42	48 34.3	12 41.95	+14.83	+0 27.84	+ 9.82	-0.04	-11.25	3 49 29.16	51 8 9.7
3 49 50.0	8.9	50 42.34	50 17.8	29 59.30	+20.20	+0 27.84	+ 9.25	-0.05	-11.20	3 51 19.05	50 50 57.0
3 51 3.0	8.5	51 55.04	51 43.6	3 43.25	+ 9.51	+0 27.83	+ 8.92	-0.05	-11.05	3 52 31.70	50 17 2.0
3 52 35.8	9.1	53 29.48	53 3.4	37 35.70	+21.11	+0 27.85	+10.34	-0.08	-11.35	3 54 6.28	51 43 22.1
ZONE 209, JANUARY 14, 1873.											
3 42 14.0	8.0	43 4.06	42 32.1	40 40.55	+26.47	+0 28.95	+ 9.00	+0.09	-11.80	3 43 41.95	50 40 22.5
3 43 32.4	8.8	44 22.52	43 55.9	18 4.50	+22.30	+0 28.94	+ 8.46	+0.08	-11.65	3 45 0.34	50 2 53.8
3 44 44.3	7.0	45 35.56	45 1.0	30 0.70	+27.91	+0 28.98	+10.27	+0.06	-12.05	3 46 13.58	51 51 4.5

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
3 45 51.3	5.0	46 41.44	46 11.7	1 8.90	+24.75	+0 28.95	+ 8.65	+0.06	-11.70	3 47 19.29	50 19 51.7
3 47 2.6	8.1	47 54.56	47 28.0	35 11.65	+21.50	+0 28.97	+10.29	+0.04	-12.00	3 48 32.56	51 45 46.9
3 48 0.3	7.5	48 51.24	48 24.3	12 49.00	+22.04	+0 28.96	+ 9.68	+0.04	-11.85	3 49 29.18	51 8 9.4
3 49 50.0	8.4	50 41.04	50 26.0	29 50.70	+12.37	+0 28.96	+ 9.39	+0.03	-11.75	3 51 18.95	50 50 57.6
3 51 3.0	8.3	51 53.76	52 24.9	3 6.90	-25.94	+0 28.95	+ 8.66	+0.02	-11.65	3 52 31.61	50 17 2.3
3 52 35.8	9.3	53 28.30	53 2.5	37 35.35	+20.86	+0 28.97	+10.35	0.00	-11.95	3 54 6.30	51 43 21.8
3 54 55.8	8.9	55 49.42	55 12.9	41 35.05	+29.56	+0 28.97	+10.06	-0.02	-11.90	3 56 27.41	51 39 30.2
3 56 16.7	8.8	57 8.18	56 41.9	3 35.10	+21.47	+0 28.97	+ 9.91	-0.03	-11.80	3 57 46.14	51 17 21.8
3 56 50.3	7.8	57 41.22	57 36.1	13 52.90	+ 4.18	+0 28.96	+ 9.90	-0.03	-11.70	3 58 19.15	51 6 46.7
4 1 50.2	9.1	2 43.32	2 8.0	25 3.00	+28.42	+0 28.98	+10.38	-0.08	-11.85	4 3 21.34	51 56 0.4
4 3 4.6	8.5	3 57.22	3 28.3	56 5.95	+23.53	+0 28.97	+ 9.93	-0.08	-11.70	4 4 35.19	51 24 52.1
4 4 22.1	8.9	5 14.26	4 48.1	48 42.70	+21.75	+0 28.96	+ 9.06	-0.09	-11.50	4 5 52.13	50 32 12.7
4 5 4.2	9.3	5 56.22	6 3.9	48 47.85	- 6.39	+0 28.96	+ 9.22	-0.09	-11.45	4 6 34.09	50 31 39.5
4 6 16.8	7.0	7 8.20	6 58.2	47 34.85	+ 8.29	+0 28.96	+ 9.18	-0.10	-11.45	4 7 46.07	50 33 7.0
4 7 26.8	8.1	8 19.80	8 2.0	37 55.70	+14.40	+0 28.97	+10.45	-0.12	-11.70	4 8 57.79	51 42 53.1
4 16 34.4	8.3	17 27.32	17 1.7	22 53.80	+21.05	+0 28.96	+ 9.54	-0.18	-11.40	4 18 5.22	50 57 59.6
4 18 30.1	8.6	19 24.16	19 4.5	1 4.40	+16.42	+0 28.95	+ 8.79	-0.19	-11.20	4 20 1.99	50 19 43.5
4 19 21.9	9.3	20 14.78	20 34.2	23 25.65	-16.29	+0 28.95	+ 8.48	-0.20	-11.30	4 20 52.56	49 56 49.0
4 20 58.7	9.0	21 53.96	21 34.7	25 9.35	+15.54	+0 28.98	+10.61	-0.23	-11.50	4 22 31.96	51 55 38.8
4 20 58.7	9.3	21 55.26	.....	.....	.....	+0 28.98	.....	-0.23	.....	4 22 33.26	.....
4 22 40.1	9.4	23 34.38	23 23.1	29 32.85	+ 9.31	+0 28.98	+ 9.63	-0.23	-11.25	4 24 12.27	50 51 8.1
4 25 0.1	8.5	25 54.58	25 17.4	6 24.20	+29.74	+0 28.98	+10.75	-0.27	-11.50	4 26 32.60	52 14 37.7
4 26 15.2	8.6	27 10.44	26 38.5	41 52.30	+25.27	+0 28.99	+11.31	-0.28	-11.55	4 27 48.52	52 39 5.4
4 28 30.9	5.0	29 26.30	28 53.6	31 18.05	+25.80	+0 28.99	+11.46	-0.31	-11.55	4 30 4.38	52 49 39.9
ZONE 210, JANUARY 19, 1873.											
3 15 32.7	7.5	16 19.18	15 54.8	22 41.00	+19.62	+0 30.50	+ 9.63	+0.41	-12.40	3 16 58.73	50 58 19.6
3 17 38.5	8.3	18 25.08	18 14.8	50 42.40	+ 8.55	+0 30.51	+ 9.14	+0.39	-12.25	3 19 4.60	50 30 6.6
3 18 14.1	9.2	19 1.02	19 14.2	20 33.90	-10.84	+0 30.50	+ 8.54	+0.39	-12.10	3 19 40.49	49 59 55.1
3 19 39.0	9.1	20 26.16	20 3.8	26 6.45	+18.44	+0 30.51	+ 9.53	+0.37	-12.35	3 21 5.72	50 54 52.4
3 20 39.4	7.3	21 25.80	21 3.6	17 56.95	+18.61	+0 30.50	+ 8.59	+0.36	-12.10	3 22 5.27	50 3 1.3
3 21 29.3	9.1	22 18.10	22 51.8	21 34.25	+21.14	+0 30.51	+ 9.56	+0.36	-12.40	3 22 57.67	50 59 27.0
3 23 38.2	9.0	24 25.48	24 2.3	11 29.35	+19.00	+0 30.51	+ 9.81	+0.34	-12.40	3 25 4.97	50 9 29.8
3 24 15.0	9.0	25 2.60	24 54.6	2 27.75	+ 6.67	+0 30.51	+ 8.99	+0.33	-12.20	3 25 42.10	50 18 18.3
3 54 55.8	8.8	55 47.82	55 20.3	41 27.10	+22.27	+0 30.54	+10.33	+0.06	-12.40	3 56 27.46	51 39 31.3
3 56 16.7	8.8	57 6.54	56 33.6	3 40.15	+26.86	+0 30.53	+ 9.91	+0.05	-11.30	3 57 46.14	51 17 23.3
3 56 50.3	7.3	57 39.66	57 30.9	13 56.10	+ 7.22	+0 30.53	+ 9.95	+0.05	-12.25	3 58 19.24	51 6 46.7
3 59 18.8	9.6	0 10.54	59 39.6	52 11.25	+25.13	+0 30.54	+10.12	-0.04	-12.30	4 0 50.10	51 28 49.2
4 1 50.2	9.2	2 41.52	2 5.5	25 4.35	+28.98	+0 30.55	+10.47	0.00	-12.40	4 3 21.19	51 55 59.8
4 3 4.6	8.5	3 55.68	3 28.5	56 3.20	+22.15	+0 30.54	+10.05	0.00	-12.25	4 4 35.30	51 24 53.7
4 4 7.5	7.0	4 57.94	5 2.7	58 26.90	- 4.00	+0 30.53	+ 9.13	-0.01	-12.05	4 5 37.44	50 22 2.9
4 5 24.9	8.8	6 15.18	6 2.4	55 38.10	+10.65	+0 30.53	+ 9.00	-0.01	-12.00	4 6 54.70	50 25 6.2
4 7 26.8	...	8 18.14	8 7.3	37 52.45	+ 8.74	+0 30.54	+10.64	-0.04	-12.30	4 8 57.78	51 42 50.9
4 16 34.4	8.0	17 25.65	.....	.....	.....	+0 30.55	.....	-0.11	.....	4 18 5.21	.....
4 18 30.1	8.0	19 22.54	18 51.9	1 13.45	+25.50	+0 30.53	+ 8.74	-0.12	-11.80	4 20 2.02	50 19 43.6
4 19 21.9	9.0	20 13.30	19 45.6	24 4.90	+23.43	+0 30.53	+ 8.46	-0.13	-11.90	4 20 52.73	49 56 49.5
4 20 58.7	8.8	21 52.24	21 26.1	25 14.45	+21.01	+0 30.57	+10.63	-0.16	-12.10	4 22 31.90	51 55 39.3
4 20 58.7	9.1	21 53.62	21 36.8	25 14.45	+13.53	+0 30.57	+10.73	-0.16	-12.10	4 22 33.28	51 55 31.9
4 22 40.1	9.3	23 32.80	23 7.6	29 42.50	+20.77	+0 30.55	+ 9.58	-0.16	-11.90	4 24 12.33	50 51 9.8
4 25 0.1	8.2	25 52.90	25 26.0	6 15.90	+21.51	+0 30.56	+11.00	-0.20	-12.20	4 26 32.57	52 14 38.0
4 26 15.2	8.4	27 8.76	26 42.6	41 47.80	+20.75	+0 30.57	+11.50	-0.20	-12.20	4 27 48.49	52 39 5.6
4 28 30.9	4.5	29 24.72	29 3.9	31 8.30	+16.41	+0 30.57	+11.72	-0.24	-12.20	4 30 4.45	52 49 40.6

ZONE 211, JANUARY 28, 1873.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
3 51 5.1	9.5	51 53.68	51 34.3	13 21.60	+16.24	+0 31.10	+ 8.62	+0.28	-12.70	3 52 33.92	50 7 28.3
3 52 40.1	9.2	53 30.28	53 20.3	34 14.90	+ 8.08	+0 31.13	+ 9.51	+0.27	-13.20	3 54 10.72	51 46 27.0
3 54 9.3	9.2	54 59.38	54 38.4	52 33.25	+16.70	+0 31.14	+11.26	+0.26	-13.40	3 55 39.90	52 28 18.6
3 55 49.3	9.1	56 40.24	56 19.4	24 33.50	+16.36	+0 31.14	+11.84	+0.24	-13.50	3 57 20.81	52 56 18.2
3 57 23.6	9.4	58 12.90	58 4.5	5 10.10	+ 7.01	+0 31.11	+ 8.80	+0.23	-12.80	3 58 53.13	50 15 29.8
4 2 31.8	8.9	3 21.30	3 1.0	12 52.40	+16.99	+0 31.10	+ 8.28	+0.18	-12.75	4 4 1.52	50 7 56.2
4 3 8.1	9.1	3 58.50	4 3.9	50 10.65	- 4.39	+0 31.12	+ 9.47	+0.17	-13.50	4 4 38.88	51 30 16.9

ZONE 212, FEBRUARY 2, 1873.

3 51 5.1	9.5	51 52.35	51 36.5	13 17.60	+13.31	+0 32.63	+ 9.05	+0.40	-12.95	3 52 34.24	50 7 30.8
3 52 40.1	9.4	53 28.84	53 12.3	34 22.95	+13.33	+0 32.68	+11.02	+0.39	-13.45	3 54 10.95	51 46 26.7
3 54 9.3	8.8	54 57.70	54 42.3	52 32.95	+12.25	+0 32.69	+11.79	+0.38	-13.65	3 55 39.89	52 28 15.9
3 55 49.3	8.9	56 38.50	56 22.5	24 31.40	+12.59	+0 32.70	+12.37	+0.36	-13.80	3 57 20.75	52 56 18.0
3 57 23.6	9.6	58 11.36	57 48.1	5 21.95	+19.45	+0 32.64	+ 9.05	+0.41	-13.05	3 58 53.30	50 15 31.6
3 59 41.2	9.0	0 29.98	0 4.0	12 20.50	+21.30	+0 32.66	+10.18	+0.32	-13.30	4 1 11.98	51 8 35.4
4 2 31.8	9.0	3 19.78	2 51.8	12 59.70	+23.44	+0 32.64	+ 8.90	+0.29	-13.00	4 4 1.65	50 7 56.9
4 3 8.1	8.7	3 56.90	4 6.5	50 8.50	- 7.80	+0 32.67	+10.63	+0.29	-13.40	4 4 38.95	51 30 18.1
4 5 30.9	8.9	6 21.52	6 6.8	57 49.45	+11.72	+0 32.67	+11.70	+0.26	-13.65	4 7 3.65	52 22 57.1
4 7 22.2	4.0	8 9.16	7 45.9	21 42.90	+19.56	+0 32.64	+ 8.80	+0.25	-13.00	4 8 51.01	49 59 9.0
4 8 19.0	8.8	9 10.18	9 1.7	46 13.55	+ 6.59	+0 32.68	+11.90	+0.24	-13.70	4 9 52.34	52 34 27.6
4 9 59.4	7.9	10 47.46	10 16.6	16 34.55	+25.89	+0 32.64	+ 8.77	+0.22	-13.00	4 11 29.31	50 4 23.2
4 11 5.6	8.5	11 54.78	11 32.6	37 51.65	+18.35	+0 32.66	+ 9.69	+0.21	-13.20	4 12 36.71	50 42 59.1
4 12 22.3	9.2	13 10.98	12 56.9	51 25.75	+11.72	+0 32.65	+ 9.44	+0.20	-13.10	4 13 52.87	50 29 18.0
4 13 32.9	6.8	14 21.78	13 56.4	47 43.15	+21.07	+0 32.65	+ 9.47	+0.19	-13.10	4 15 3.68	50 33 9.8
4 14 47.2	9.2	15 37.34	15 24.4	17 58.05	+10.59	+0 32.67	+ 9.05	+0.18	-13.25	4 16 19.31	51 2 43.7
4 15 59.2	8.8	16 48.80	16 29.5	56 8.60	+16.06	+0 32.66	+ 9.31	+0.17	-13.10	4 17 30.69	50 24 38.8
4 17 22.9	9.3	18 13.46	17 48.3	21 15.55	+20.93	+0 32.67	+ 9.36	+0.15	-13.20	4 18 55.41	50 59 36.5
4 19 13.8	8.7	20 3.50	19 30.3	0 53.90	+27.08	+0 32.68	+10.20	+0.13	-13.35	4 20 45.49	51 20 4.6
4 35 15.8	8.0	36 6.30	35 47.5	28 57.00	+15.49	+0 32.68	+ 9.96	-0.01	-13.15	4 36 48.19	50 51 47.3
4 36 55.9	8.5	37 45.68	37 18.9	51 37.10	+22.26	+0 32.67	+ 9.34	-0.02	-13.00	4 38 27.51	50 29 13.3
4 38 41.6	9.0	39 31.46	38 59.0	9 15.00	+27.16	+0 32.66	+ 8.96	-0.04	-12.90	4 40 13.24	50 11 39.7
4 40 40.0	8.8	41 30.48	41 14.7	1 59.55	+13.17	+0 32.68	+ 9.26	-0.06	-12.90	4 42 12.28	50 18 41.1
4 43 24.7	8.9	44 15.62	43 49.3	6 53.15	+21.50	+0 32.68	+10.24	-0.09	-13.10	4 44 57.50	51 13 56.2
.....	8.9	47 24.06	46 53.1	25 54.70	+24.97	+0 32.70	+10.93	-0.12	-13.25	4 48 6.01	51 54 57.9
4 49 32.6	8.2	50 22.68	49 49.1	2 30.95	+27.42	+0 32.68	+10.22	-0.15	-13.05	4 51 4.54	51 18 23.3
4 50 57.4	8.5	51 48.63	51 15.9	51 52.30	+26.58	+0 32.69	+10.41	-0.16	-13.10	4 52 30.52	51 29 1.0
4 51 58.8	9.5	52 51.14	52 33.6	49 31.30	+14.21	+0 32.70	+10.76	-0.17	-13.10	4 53 33.04	51 31 9.8
4 54 12.2	9.3	55 4.64	54 28.7	35 34.95	+29.01	+0 32.71	+10.65	-0.19	-13.10	4 55 46.56	51 45 20.5
4 56 10.4	8.6	57 1.62	56 37.5	25 55.30	+20.26	+0 32.67	+ 8.69	-0.19	-12.60	4 57 43.30	49 54 49.6
5 2 13.0	8.2	3 5.40	2 42.3	50 19.35	+18.77	+0 32.70	+10.48	-0.26	-12.90	5 3 47.24	51 30 24.5
5 4 33.7	8.8	5 25.88	4 50.8	19 48.55	+28.83	+0 32.69	+ 9.92	-0.28	-12.75	5 6 7.65	51 1 4.6
5 6 5.3	9.2	6 56.30	6 29.3	53 53.35	+22.44	+0 32.68	+ 9.32	-0.29	-12.60	5 7 37.99	50 26 52.7
5 7 47.1	8.8	8 38.84	8 2.9	47 24.70	+29.77	+0 32.68	+ 9.29	-0.30	-12.60	5 9 20.53	50 33 28.4

ZONE 213, FEBRUARY 4, 1873.

3 51 5.1	9.5	51 51.74	52 3.7	12 52.55	-10.04	+0 33.00	+ 8.28	+0.45	-12.95	3 52 34.05	50 7 30.8
3 52 40.1	9.8	53 28.50	53 2.0	34 28.35	+21.41	+0 33.04	+ 9.93	+0.44	-13.55	3 54 11.02	51 46 27.2
3 55 49.3	8.8	56 38.06	56 8.9	24 38.10	+22.66	+0 33.05	+11.13	+0.41	-13.80	3 57 20.71	52 56 19.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
4 2 2.2	9.0	2 49.57	2 30.4	16 35.00	+16.09	+0 33.01	+ 9.13	+0.34	-13.10	4 3 31.86	50 4 13.4
4 3 8.1	9.0	3 52.84	4 23.4	55 13.90	-24.91	+0 33.04	+10.12	+0.33	-13.10	4 4 35.30	51 24 54.4
4 5 30.9	9.0	6 21.06	6 3.4	57 50.95	+14.11	+0 33.04	+11.64	+0.31	-13.75	4 7 3.61	52 22 55.9
4 7 22.2	5.0	8 8.80	7 31.7	21 52.90	+31.15	+0 33.01	+ 7.78	+0.29	-13.10	4 8 51.06	49 59 8.5
4 12 22.3	9.4	13 10.46	13 6.2	51 15.45	+ 3.57	+0 33.02	+ 8.59	+0.25	-13.25	4 13 52.77	50 29 8.2
4 13 32.9	7.5	14 21.34	13 52.2	47 44.90	+24.13	+0 33.02	+ 8.56	+0.23	-13.24	4 15 3.65	55 33 19.2
ZONE 214, FEBRUARY 5, 1873.											
4 35 15.8	8.7	36 5.16	35 48.7	28 54.20	+13.60	+0 33.71	+ 9.57	+0.05	-13.35	4 36 48.14	50 51 47.6
4 36 28.9	7.9	37 18.18	37 47.2	59 43.85	-24.11	+0 33.71	+ 9.01	+0.04	-13.20	4 38 1.11	50 20 19.6
4 38 41.6	9.2	39 30.30	39 9.1	9 4.20	+17.72	+0 33.70	+ 8.76	+0.02	-13.15	4 40 13.18	50 11 40.6
4 43 24.7	9.3	44 14.65	43 39.2	6 58.90	+28.94	+0 33.72	+ 9.64	-0.03	-13.35	4 44 57.63	51 13 57.0
.....	8.8	47 22.88	47 10.0	25 39.65	+10.39	+0 33.73	+10.65	-0.06	-13.55	4 48 5.92	51 54 57.8
4 49 32.6	8.0	50 21.56	49 59.4	2 21.55	+18.12	+0 33.72	+ 9.95	-0.08	-13.35	4 51 4.53	51 18 22.8
4 50 57.4	8.2	51 47.52	51 26.7	51 43.55	+16.91	+0 33.72	+10.18	-0.10	-13.35	4 52 30.50	51 28 59.6
4 51 58.8	9.4	52 50.08	52 31.8	49 31.40	+14.86	+0 33.72	+10.30	-0.11	-13.35	4 53 33.06	51 31 9.7
4 53 30.2	8.5	54 19.76	54 19.6	37 2.65	+ 0.16	+0 33.73	+10.55	-0.13	-13.40	4 55 2.77	51 43 23.6
4 55 6.4	9.5	55 58.12	55 38.4	34 23.50	+15.91	+0 33.72	+10.54	-0.14	-13.40	4 56 41.09	51 46 18.3
4 56 10.4	8.5	57 0.38	56 46.4	25 47.50	+11.77	+0 33.70	+ 8.42	-0.14	-12.90	4 57 43.14	49 54 48.3
4 57 22.0	8.7	58 13.60	57 51.0	30 38.40	+18.24	+0 33.73	+10.46	-0.16	-13.40	4 58 56.60	51 50 5.2
5 0 15.9	9.0	1 9.82	0 42.5	26 12.15	+22.09	+0 33.74	+10.50	-0.19	-13.30	5 1 52.81	51 54 35.0
5 2 13.0	8.9	3 4.32	2 42.9	50 16.00	+17.39	+0 33.73	+10.12	-0.20	-13.25	5 3 47.25	51 30 25.8
5 4 33.7	9.0	5 24.80	5 7.6	19 31.15	+14.12	+0 33.73	+ 9.75	-0.22	-13.05	5 6 7.67	51 1 6.8
5 6 5.3	9.2	6 54.92	6 40.8	53 42.80	+11.72	+0 33.72	+ 9.10	-0.23	-12.90	5 7 37.71	50 26 52.0
5 7 47.1	8.4	8 37.86	8 15.2	47 10.70	+18.83	+0 33.72	+ 9.10	-0.25	-12.90	5 9 20.64	50 33 30.9
5 9 56.0	8.7	10 45.72	10 21.8	5 8.90	+19.95	+0 33.71	+ 8.67	-0.26	-12.80	5 11 28.46	50 15 33.1
5 12 16.1	8.2	13 6.74	12 46.0	14 56.35	+17.34	+0 33.71	+ 8.65	-0.28	-12.70	5 13 49.45	50 5 42.6
5 13 51.4	...	14 41.18	14 15.0	5 31.75	+21.87	+0 33.71	+ 8.65	-0.30	-12.70	5 15 23.89	50 15 11.6
5 15 26.5	9.0	16 15.58	15 47.7	10 56.70	+23.33	+0 33.71	+ 8.54	-0.31	-12.65	5 16 58.27	50 9 47.8
5 16 29.1	8.8	17 22.18	16 54.9	18 0.10	+22.89	+0 33.72	+ 8.50	-0.32	-12.60	5 18 4.86	50 2 43.8
5 17 5.5	9.0	17 57.82	17 49.2	51 21.35	+ 7.14	+0 33.72	+ 9.12	-0.33	-12.70	5 18 40.54	50 29 7.2
5 18 56.8	9.5	19 49.98	19 25.9	59 46.15	+19.22	+0 33.76	+11.16	-0.37	-13.15	5 20 32.93	52 20 55.8
5 20 27.7	9.3	21 20.66	20 59.1	7 0.05	+17.27	+0 33.75	+11.08	-0.38	-13.10	5 22 3.58	52 13 39.6
5 21 53.9	8.3	22 46.96	22 27.6	47 6.80	+15.40	+0 33.76	+11.36	-0.40	-13.15	5 23 29.91	52 33 31.0
5 23 12.2	7.0	24 5.06	23 39.4	27 47.55	+20.24	+0 33.76	+11.67	-0.42	-13.20	5 24 48.03	52 52 55.1
5 24 13.1	9.1	25 5.32	24 52.9	24 30.60	+10.42	+0 33.72	+ 8.58	-0.38	-12.40	5 25 47.95	49 55 59.8
5 27 10.7	9.5	28 2.28	27 36.3	21 39.80	+20.90	+0 33.73	+ 9.55	-0.42	-12.65	5 28 45.00	50 59 1.2
5 28 13.0	8.4	29 6.22	28 54.2	30 56.50	+ 9.47	+0 33.76	+11.69	-0.46	-13.05	5 29 49.16	52 49 34.7
5 29 38.2	9.2	30 30.04	30 11.8	1 17.80	+14.52	+0 33.75	+11.09	-0.47	-12.90	5 31 12.90	52 19 17.7
5 30 44.7	8.3	31 37.32	31 30.0	44 39.50	+ 5.79	+0 33.76	+11.58	-0.48	-12.95	5 32 20.21	52 35 47.6
5 32 41.7	8.7	33 34.38	33 11.8	42 40.55	+17.90	+0 33.76	+11.43	-0.50	-12.90	5 34 17.27	52 37 58.2
5 33 49.0	8.8	34 38.32	34 12.9	40 38.10	+21.01	+0 33.73	+ 9.17	-0.47	-12.40	5 35 20.97	50 40 1.8
5 36 3.3	7.0	36 53.88	36 30.3	18 29.30	+19.79	+0 33.72	+ 8.55	-0.48	-12.15	5 37 36.44	50 2 8.6
5 36 57.6	9.0	37 47.46	37 33.0	22 26.35	+11.66	+0 33.74	+ 9.67	-0.51	-12.40	5 38 30.12	50 58 4.1
5 45 52.5	8.2	46 42.90	46 25.1	0 33.40	+14.83	+0 33.74	+ 8.87	-0.57	-12.00	5 47 25.43	50 19 58.3
5 47 16.9	8.5	48 9.28	47 48.2	51 59.65	+16.78	+0 33.77	+11.27	-0.62	-12.45	5 48 52.05	52 28 35.7
5 48 21.4	8.8	49 15.16	48 56.3	0 49.45	+15.08	+0 33.76	+11.12	-0.63	-12.40	5 49 57.89	52 19 43.9
5 49 5.4	9.0	49 58.96	49 49.9	22 2.50	+ 7.48	+0 33.73	+ 8.56	-0.59	-11.80	5 50 41.43	49 58 21.2
5 49 22.6	8.0	50 12.80	50 25.3	22 3.50	-10.28	+0 33.73	+ 8.55	-0.59	-11.80	5 50 55.27	49 58 2.4
5 50 14.3	9.8	51 8.46	51 14.2	31 37.45	- 4.56	+0 33.77	+11.75	-0.64	-11.90	5 51 51.26	52 48 37.0
5 51 34.6	5.5	52 23.50	52 7.1	26 25.40	+13.79	+0 33.73	+ 8.45	-0.61	-11.70	5 53 5.93	49 54 4.1
5 53 22.2	9.0	54 15.38	53 56.7	25 38.80	+15.39	+0 33.74	+ 9.53	-0.64	-11.90	5 54 57.91	50 54 53.1
5 55 34.7	8.7	56 25.98	56 17.3	17 11.15	+ 7.29	+0 33.73	+ 8.67	-0.64	-11.65	5 57 8.41	50 3 11.4

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
5 56 43.4	8.5	57 33.92	57 14.1	45 48.60	+16.42	+0 33.74	+ 9.18	-0.66	-11.75	5 58 16.40	50 34 43.3
5 57 22.9	9.3	58 15.02	58 7.3	22 13.00	+ 6.19	+0 33.75	+10.82	-0.70	-12.05	5 58 57.51	50 58 9.9
5 58 27.9	9.1	59 22.58	59 5.3	29 40.15	+13.64	+0 33.78	+11.82	-0.72	-12.15	6 0 5.31	52 50 50.9
6 0 7.8	6.0	1 0.30	0 46.3	40 15.35	+11.08	+0 33.78	+11.51	-0.74	-12.10	6 1 42.99	52 40 12.6
6 1 13.8	9.2	2 8.70	1 53.9	35 3.65	+11.69	+0 33.78	+11.58	-0.75	-12.05	6 2 51.39	52 45 24.9
6 2 27.0	7.5	3 18.36	2 54.7	18 3.95	+19.03	+0 33.77	+10.81	-0.74	-11.85	6 4 0.96	52 2 31.1
6 4 30.8	6.5	5 23.26	5 1.5	7 24.05	+17.43	+0 33.77	+10.99	-0.76	-11.85	6 6 5.86	52 13 9.3
6 5 37.7	8.6	6 30.60	6 1.7	45 53.50	+22.93	+0 33.78	+10.97	-0.78	-11.90	6 7 13.24	52 34 45.0
6 8 0.6	9.0	8 54.50	8 23.4	54 41.50	+24.75	+0 33.78	+10.98	-0.80	-11.75	6 9 37.10	52 25 58.6
ZONE 215, FEBRUARY 6, 1873.											
5 12 16.1	8.5	13 5.86	12 40.8	15 0.10	+21.02	+0 34.42	+ 8.32	-0.26	-12.82	5 13 49.30	50 5 42.0
5 13 51.4	...	14 40.38	14 14.4	5 31.05	+21.70	+0 34.42	+ 8.49	-0.28	-12.85	5 15 23.82	50 15 11.6
5 15 26.5	9.0	16 14.72	15 46.1	10 57.20	+23.91	+0 34.42	+ 8.36	-0.29	-12.80	5 16 58.14	50 9 47.3
5 16 29.1	9.2	17 21.40	16 56.4	17 56.85	+20.96	+0 34.42	+ 8.35	-0.30	-12.70	5 18 4.80	50 2 44.6
5 18 56.8	10.0	19 49.40	19 35.1	59 37.05	+11.40	+0 34.45	+11.06	-0.35	-13.25	5 20 33.06	52 20 56.6
5 20 27.7	9.2	21 19.94	21 2.5	6 57.00	+13.91	+0 34.45	+10.80	-0.36	-13.20	5 22 3.58	52 13 38.6
5 21 53.9	7.5	22 46.12	22 9.9	46 32.00	-18.88	+0 34.46	+11.20	-0.38	-13.25	5 23 29.79	52 33 31.0
5 23 12.2	7.9	24 4.40	23 49.3	27 38.35	+11.89	+0 34.47	+11.60	-0.40	-13.30	5 24 48.10	52 52 55.5
5 24 13.1	9.1	25 4.78	24 41.5	24 39.10	+19.58	+0 34.43	+ 8.31	-0.36	-12.55	5 25 48.14	49 55 59.7
5 27 8.9	9.2	28 0.20	27 30.4	26 20.45	+24.53	+0 34.44	+ 9.19	-0.40	-12.75	5 28 43.64	50 54 23.5
5 28 13.0	7.8	29 5.58	28 50.9	30 58.55	+11.59	+0 34.47	+11.46	-0.44	-13.15	5 29 49.25	52 49 34.1
5 29 38.2	9.4	30 29.36	30 14.0	1 14.55	+12.29	+0 34.46	+10.91	-0.45	-13.00	5 31 12.95	52 19 18.2
5 30 44.7	8.4	31 36.54	31 15.7	44 50.20	+16.50	+0 34.46	+11.29	-0.46	-13.05	5 32 20.15	52 35 46.9
5 32 41.7	8.5	33 33.54	33 3.6	42 46.40	+23.69	+0 34.46	+11.13	-0.48	-13.00	5 34 17.15	52 37 57.4
5 33 49.0	8.4	34 37.58	34 17.5	40 33.95	+16.63	+0 34.44	+ 9.04	-0.45	-12.50	5 35 20.96	50 40 1.0
5 36 3.3	6.9	36 53.18	36 33.0	18 26.50	+16.94	+0 34.43	+ 8.42	-0.46	-12.25	5 37 36.47	50 2 8.0
5 36 57.6	8.8	37 46.68	37 18.3	22 35.90	+22.84	+0 34.44	+ 9.34	-0.49	-12.50	5 38 30.06	50 58 5.1
5 38 26.6	9.0	39 19.08	38 49.5	55 42.65	+24.62	+0 34.43	+ 8.64	-0.49	-12.35	5 40 2.39	50 24 59.3
.....	9.2	41 35.72	41 7.2	56 25.05	+23.71	+0 34.43	+ 8.52	-0.50	-12.25	5 42 19.01	50 24 15.1
5 40 55.0	8.8	41 47.28	41 10.6	56 25.05	+30.54	+0 34.43	+ 8.66	-0.50	-12.25	5 42 30.57	50 24 22.5
5 42 20.9	8.7	43 10.74	42 49.0	11 54.05	+18.16	+0 34.43	+ 8.48	-0.52	-12.30	5 43 53.99	50 8 40.6
5 44 6.7	9.1	44 56.24	44 39.0	19 37.95	+14.43	+0 34.43	+ 8.47	-0.53	-12.10	5 45 39.47	50 0 52.9
5 45 52.5	8.6	46 42.18	46 16.9	0 39.05	+21.08	+0 34.43	+ 8.61	-0.55	-12.10	5 47 25.42	50 19 58.3
5 47 16.9	8.5	48 8.40	48 3.3	51 46.60	+ 4.06	+0 34.47	+11.16	-0.61	-12.55	5 48 51.88	52 28 35.6
5 48 21.4	8.5	49 14.44	49 1.8	0 44.00	+10.05	+0 34.47	+10.96	-0.61	-12.50	5 49 57.90	52 19 43.8
5 49 5.4	9.2	49 58.18	50 4.2	21 50.40	- 4.93	+0 34.43	+ 8.40	-0.58	-11.95	5 50 41.36	49 58 20.3
5 49 22.6	7.9	50 11.98	50 40.8	21 50.40	-23.67	+0 34.43	+ 8.18	-0.58	-11.95	5 50 55.16	49 58 1.3
5 53 22.2	9.0	54 14.68	53 52.0	25 41.00	+18.69	+0 34.45	+ 9.30	-0.63	-12.05	5 54 57.93	50 54 53.5
5 55 34.7	8.0	56 25.20	56 0.9	17 22.90	+20.37	+0 34.43	+ 8.35	-0.63	-11.75	5 57 8.34	50 3 12.1
5 56 43.4	8.4	57 33.16	57 10.7	45 50.55	+18.65	+0 34.44	+ 8.92	-0.65	-11.85	5 58 16.35	50 34 43.0
5 57 22.9	9.1	58 14.28	58 4.8	22 15.40	+ 7.64	+0 34.45	+10.59	-0.68	-12.15	5 58 57.49	50 58 8.4
5 58 27.9	9.0	59 21.72	59 8.3	29 38.15	+10.54	+0 34.48	+11.64	-0.71	-12.35	6 0 5.16	52 50 49.2
6 0 7.8	6.7	0 59.50	0 38.6	40 19.45	+16.54	+0 34.48	+11.22	-0.73	-12.25	6 1 42.90	52 40 13.3
6 1 13.8	9.1	2 7.88	1 53.4	35 2.00	+11.46	+0 34.48	+11.36	-0.74	-12.25	6 2 51.28	52 45 25.6
6 2 27.0	7.0	3 17.66	2 55.9	18 3.60	+17.51	+0 34.47	+10.60	-0.73	-12.00	6 4 0.97	52 2 29.3
6 4 30.8	7.2	5 22.46	4 53.3	7 29.45	+23.35	+0 34.47	+10.68	-0.75	-12.00	6 6 5.77	52 13 9.0
ZONE 216, FEBRUARY 10, 1873.											
4 51 30.4	9.3	52 17.52	52 8.8	0 14.15	+ 7.25	+0 35.86	+ 9.22	+0.01	-13.45	4 53 2.62	50 20 20.9

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
4 54 0.4	9.6	54 48.32	54 30.0	30 19.95	+15.09	+0 35.87	+ 9.73	-0.01	-13.55	4 55 33.48	50 50 22.8
4 54 46.9	8.3	55 33.44	55 20.8	28 27.30	+10.60	+0 35.86	+ 8.73	-0.02	-13.30	4 56 18.48	49 52 10.1
5 3 37.3	9.0	4 25.34	4 4.8	35 27.65	+16.93	+0 35.87	+ 9.61	-0.10	-13.50	5 5 10.43	50 45 15.3
5 12 21.5	8.8	13 8.54	12 47.7	48 58.30	+17.26	+0 35.87	+10.48	-0.17	-13.30	5 13 53.57	50 31 44.5
5 13 35.3	8.7	14 23.02	14 5.6	28 59.55	+14.34	+0 35.88	+ 9.90	-0.20	-13.30	5 15 8.07	50 51 39.6
5 16 49.6	9.3	17 41.55	17 19.8	57 56.90	+17.98	+0 35.88	+ 9.06	-0.23	-13.20	5 18 26.52	50 22 44.6
5 21 23.1	8.6	22 13.44	22 0.5	18 39.60	+10.04	+0 35.91	+11.31	-0.28	-13.55	5 22 58.60	52 1 55.0
5 22 43.7	8.3	23 33.42	23 18.1	12 40.90	+12.26	+0 35.91	+11.37	-0.30	-13.55	5 24 18.57	52 7 55.8
5 24 13.1	8.7	25 3.20	24 42.1	24 38.00	+17.74	+0 35.87	+ 8.77	-0.29	-12.95	5 25 48.07	49 56 1.9
5 26 4.6	8.6	26 53.96	26 28.6	2 1.50	+20.73	+0 35.89	+10.27	-0.32	-13.25	5 27 38.98	51 18 42.3
5 27 10.7	9.1	28 0.12	27 47.2	21 31.65	+10.60	+0 35.88	+ 9.99	-0.33	-13.20	5 28 45.08	50 59 1.6
5 28 13.0	8.6	29 4.04	28 49.9	31 0.15	+11.12	+0 35.92	+12.18	-0.36	-13.65	5 29 49.24	52 49 35.2
5 29 38.2	9.0	30 27.70	30 9.9	1 18.90	+14.20	+0 35.91	+11.54	-0.37	-13.50	5 31 12.82	52 19 18.8
5 30 44.7	8.1	31 35.10	31 15.7	44 52.60	+15.39	+0 35.92	+11.84	-0.38	-13.55	5 32 20.25	52 35 46.3
5 33 49.0	8.8	34 36.18	34 8.7	40 43.65	+22.75	+0 35.88	+ 9.44	-0.38	-12.95	5 35 21.07	50 40 0.3
5 35 23.0	6.8	36 21.70	36 19.1	52 19.05	+ 2.11	+0 35.90	+10.64	-0.41	-13.15	5 37 6.67	51 28 5.0
5 36 54.0	9.0	37 43.14	37 22.2	50 55.36	+16.61	+0 35.92	+11.72	-0.43	-13.40	5 38 28.24	52 29 43.7
5 37 49.6	8.8	38 37.98	38 21.2	17 11.95	+14.08	+0 35.87	+ 8.89	-0.41	-12.70	5 39 22.78	50 3 22.4
5 40 2.0	9.0	40 51.56	40 28.8	44 59.00	+18.90	+0 35.88	+ 9.41	-0.44	-12.80	5 41 36.39	50 35 40.1
5 41 10.8	8.3	41 58.10	41 41.5	36 10.45	+13.71	+0 35.88	+ 9.65	-0.45	-12.80	5 42 42.94	50 44 23.5
5 42 31.6	8.2	43 18.98	42 48.0	38 38.85	+25.65	+0 35.88	+ 9.55	-0.46	-12.75	5 44 3.80	50 42 6.8
ZONE 217, FEBRUARY 11, 1873.											
5 11 3.7	9.0	11 51.56	11 33.5	58 23.45	+15.07	+0 36.15	+ 8.91	-0.14	-13.35	5 12 36.87	50 22 14.7
5 14 46.5	9.2	15 35.18	15 17.9	26 37.00	+14.24	+0 36.17	+ 9.46	-0.19	-13.45	5 16 20.54	50 54 0.1
5 16 49.6	9.7	17 41.35	17 28.5	57 48.65	+10.82	+0 36.16	+ 8.96	-0.20	-13.30	5 18 26.63	50 22 44.4
5 21 23.1	8.5	22 13.00	21 56.1	18 40.90	+13.57	+0 36.19	+10.80	-0.26	-13.65	5 22 58.46	52 1 55.5
5 22 43.7	8.9	23 33.24	23 14.1	12 42.25	+15.30	+0 36.19	+10.88	-0.28	-13.65	5 24 18.69	52 7 55.8
5 24 13.1	9.1	25 2.76	24 49.0	24 31.55	+11.59	+0 36.15	+ 8.50	-0.27	-13.00	5 25 47.93	49 56 0.8
5 26 4.6	9.0	26 53.68	26 27.4	1 59.30	+21.46	+0 36.17	+ 9.86	-0.30	-13.40	5 27 39.00	51 18 43.5
5 27 10.7	9.2	27 59.76	27 41.5	21 34.35	+15.04	+0 36.17	+ 9.56	-0.31	-13.30	5 28 45.03	50 59 1.7
5 28 13.0	8.4	29 3.64	28 47.7	30 58.40	+12.54	+0 36.21	+11.68	-0.34	-13.75	5 29 49.15	52 49 36.6
5 29 38.2	9.3	30 27.48	30 15.5	1 13.50	+ 9.56	+0 36.20	+11.11	-0.35	-13.60	5 31 12.91	52 19 17.8
5 30 44.7	8.8	31 34.64	31 22.6	44 43.95	+ 9.52	+0 36.21	+11.41	-0.36	-13.65	5 32 20.10	52 35 47.4
5 33 49.0	8.5	34 35.80	34 6.1	40 42.55	+24.57	+0 36.17	+ 9.02	-0.35	-13.05	5 35 21.01	50 40 1.6
5 35 33.0	6.5	36 21.48	36 2.2	52 30.25	+15.69	+0 36.19	+10.12	-0.39	-13.25	5 37 6.76	51 28 5.6
5 36 54.0	9.2	37 42.76	37 24.7	50 49.50	+14.38	+0 36.21	+11.25	-0.42	-13.50	5 38 28.16	52 29 45.6
5 37 49.6	8.5	38 37.64	38 20.8	17 8.35	+14.08	+0 36.16	+ 8.53	-0.39	-12.85	5 39 22.75	50 3 24.3
5 40 2.0	9.5	40 51.34	40 33.3	44 51.45	+14.92	+0 36.17	+ 9.08	-0.42	-12.90	5 41 36.48	50 35 42.1
5 41 10.8	8.0	41 57.88	41 38.9	36 9.55	+15.70	+0 36.17	+ 9.24	-0.43	-12.90	5 42 43.03	50 44 24.8
5 42 31.6	8.5	43 18.74	42 52.9	38 31.15	+21.33	+0 36.17	+ 9.24	-0.44	-12.90	5 44 3.87	50 42 8.6
5 44 42.5	9.2	45 31.60	45 11.6	48 45.95	+16.59	+0 36.17	+ 9.09	-0.46	-12.75	5 46 16.70	50 31 48.6
5 48 7.7	6.5	48 54.34	48 28.3	26 9.40	+21.86	+0 36.16	+ 8.43	-0.48	-12.55	5 49 39.34	49 54 29.4
5 49 5.4	9.0	49 56.42	49 42.6	22 6.70	+11.59	+0 36.16	+ 8.46	-0.48	-12.55	5 50 41.43	49 58 21.7
5 49 22.6	8.4	50 10.14	50 19.2	22 6.70	- 7.64	+0 36.16	+ 8.48	-0.48	-12.55	5 50 55.15	49 58 2.5
5 51 34.6	6.3	52 20.94	51 54.2	26 34.15	+22.45	+0 36.16	+ 8.23	-0.51	-12.45	5 53 5.90	49 54 4.5
5 53 28.1	9.2	54 18.60	53 55.8	35 52.55	+18.83	+0 36.17	+ 9.22	-0.54	-12.65	5 55 3.65	50 44 43.0
5 55 28.7	9.0	56 17.38	55 53.5	26 24.95	+20.56	+0 36.17	+ 8.26	-0.54	-12.35	5 57 2.33	49 54 11.3
5 57 17.0	8.8	58 5.46	57 39.4	23 20.60	+21.92	+0 36.17	+ 8.35	-0.56	-12.35	5 58 50.40	49 57 16.8
5 58 41.4	8.6	59 28.52	59 6.2	9 58.50	+18.65	+0 36.17	+ 8.56	-0.58	-12.35	6 0 13.46	50 10 35.6
6 1 5.6	8.6	1 54.18	1 25.3	22 26.85	+24.26	+0 36.17	+ 8.28	-0.59	-12.20	6 2 39.09	49 58 12.3
6 2 2.8	9.0	2 53.68	2 31.5	19 23.35	+17.03	+0 36.21	+10.76	-0.64	-12.70	6 3 38.82	52 1 10.4
6 2 27.0	7.9	3 15.72	3 32.8	17 31.75	-13.73	+0 36.21	+10.75	-0.64	-12.70	6 4 0.86	52 2 31.2

ZONE 218, FEBRUARY 17, 1873.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
4 51 12.0	9.0	51 56.00	51 27.1	3 0.85	+24.08	+0 39.06	+ 8.58	+0.18	-13.85	4 52 44.47	50 17 48.1
4 51 30.4	8.8	52 14.20	52 18.0	0 1.25	- 3.17	+0 39.06	+ 8.77	+0.18	-13.85	4 53 2.67	50 20 20.6
4 54 0.4	9.2	54 45.00	54 24.4	30 18.50	+16.98	+0 39.07	+ 9.21	+0.16	-14.00	4 55 33.53	50 50 23.3
4 54 46.9	8.0	55 30.12	55 44.3	27 59.75	-11.95	+0 39.06	+ 8.29	+0.15	-13.70	4 56 18.53	49 52 12.4
4 56 12.9	8.0	56 55.36	57 10.6	12 11.75	-12.72	+0 39.06	+ 8.54	+0.14	-13.75	4 57 43.79	50 7 59.6
5 3 37.3	8.9	4 21.98	3 59.9	35 24.60	+18.25	+0 39.08	+ 9.11	+0.06	-13.95	5 5 10.44	50 45 16.8
5 4 51.4	9.2	5 38.60	5 19.9	53 39.70	+15.54	+0 39.08	+ 8.90	+0.05	-13.85	5 6 27.02	50 26 58.7
5 6 35.6	9.2	7 21.36	6 51.3	5 46.35	+24.05	+0 39.10	+10.64	+0.03	-14.35	5 8 10.00	52 15 1.5
5 11 3.7	8.5	11 48.48	11 23.1	58 28.55	+21.15	+0 39.07	+ 9.29	-0.01	-13.80	5 12 36.84	50 22 14.8
5 12 21.5	9.2	13 5.14	12 41.0	48 54.95	+20.00	+0 39.08	+ 8.98	-0.02	-13.85	5 13 53.53	50 31 46.7
5 13 35.3	8.5	14 19.66	13 59.7	28 58.20	+16.48	+0 39.09	+ 9.37	-0.04	-13.80	5 15 8.08	50 51 40.2
5 14 46.5	9.1	15 32.08	15 10.8	26 40.05	+17.53	+0 39.09	+ 9.32	-0.05	-13.90	5 16 20.50	50 53 59.0
5 16 49.6	9.5	17 38.40	17 14.0	57 57.90	+20.32	+0 39.09	+ 8.72	-0.07	-13.75	5 18 26.74	50 22 43.2
5 21 23.1	8.4	22 9.88	21 51.6	18 41.25	+14.70	+0 39.13	+10.69	-0.12	-14.20	5 22 58.42	52 1 54.9
5 22 43.7	8.8	23 30.06	23 8.8	12 43.60	+17.07	+0 39.13	+10.63	-0.14	-14.20	5 24 18.59	52 7 54.6
5 24 13.1	9.1	24 59.76	24 35.8	24 39.45	+20.16	+0 39.09	+ 8.31	-0.13	-13.50	5 25 48.01	49 56 0.0
5 26 4.6	8.8	26 50.54	26 24.3	1 58.35	+21.39	+0 39.11	+ 9.72	-0.16	-13.90	5 27 38.94	51 18 43.0
5 27 10.7	9.2	27 56.52	27 38.4	21 32.50	+14.87	+0 39.10	+ 9.45	-0.17	-13.80	5 28 44.86	50 59 2.0
5 28 13.0	7.9	29 0.56	28 46.3	30 57.90	+11.28	+0 39.13	+11.57	-0.20	-14.35	5 29 49.13	52 49 34.4
5 29 38.2	9.2	30 24.38	30 0.3	1 23.05	+19.23	+0 39.12	+10.87	-0.21	-14.15	5 31 12.87	52 19 16.4
5 30 44.7	8.1	31 31.64	31 6.8	44 53.45	+19.68	+0 39.12	+11.13	-0.22	-14.22	5 32 20.15	52 35 46.5
5 33 49.0	8.4	34 32.64	34 6.1	40 38.20	+21.92	+0 39.11	+ 8.95	-0.23	-13.65	5 35 20.91	50 40 1.8
5 35 33.0	7.0	36 18.44	35 54.6	52 34.10	+19.35	+0 39.12	+ 9.96	-0.26	-13.85	5 37 6.78	51 28 3.9
5 36 54.0	9.1	37 39.70	37 16.5	50 52.75	+18.44	+0 39.13	+11.09	-0.28	-14.10	5 38 28.16	52 29 44.9
5 37 49.6	8.6	38 34.52	38 25.1	17 3.00	+ 7.88	+0 39.10	+ 8.46	-0.27	-13.40	5 39 22.69	50 3 22.1
5 40 2.0	9.4	40 48.12	40 29.3	44 51.95	+15.58	+0 39.11	+ 9.10	-0.29	-13.50	5 41 36.33	50 35 41.0
5 41 10.8	8.3	41 54.74	41 29.1	36 14.50	+21.15	+0 39.11	+ 9.07	-0.30	-13.50	5 42 42.96	50 44 23.7
5 42 31.6	8.0	43 15.66	42 48.7	38 31.25	+22.32	+0 39.12	+ 9.12	-0.32	-13.50	5 44 3.86	50 42 8.0
5 44 42.5	9.1	45 28.58	45 52.6	48 8.55	-19.92	+0 39.12	+ 8.94	-0.33	-13.40	5 46 16.76	50 31 48.0
5 48 7.7	6.0	48 51.22	48 21.1	26 11.65	+25.31	+0 39.11	+ 8.10	-0.36	-13.15	5 49 39.29	49 54 28.9
5 49 5.4	9.0	49 53.26	49 28.5	22 15.80	+20.82	+0 39.12	+ 8.26	-0.37	-13.15	5 50 41.34	49 58 20.3
5 49 22.6	8.2	50 7.10	50 4.6	22 15.80	+ 2.10	+0 39.13	+ 8.42	-0.37	-13.15	5 50 55.19	49 58 1.7
5 51 34.6	6.1	52 17.92	51 47.1	26 37.05	+25.85	+0 39.12	+ 8.07	-0.39	-13.10	5 53 5.96	49 54 3.5
5 53 28.1	9.1	54 15.54	53 45.9	35 57.90	+24.45	+0 39.13	+ 9.04	-0.42	-13.30	5 55 3.67	50 44 41.7
5 55 28.7	9.0	56 14.28	55 48.6	26 24.60	+21.61	+0 39.12	+ 8.13	-0.43	-13.00	5 57 2.29	49 54 11.2
5 57 17.0	8.6	58 2.42	57 39.0	23 16.75	+19.65	+0 39.12	+ 8.30	-0.44	-13.00	5 58 50.43	49 57 16.9
5 58 41.4	8.8	59 25.50	58 57.2	10 2.80	+23.66	+0 39.12	+ 8.37	-0.46	-13.05	6 0 13.51	50 10 34.6
6 1 5.6	8.8	1 51.02	1 23.3	22 25.45	+23.26	+0 39.13	+ 8.23	-0.48	-12.90	6 2 39.00	49 58 11.2
6 2 2.8	9.1	2 50.54	2 30.5	19 22.95	+16.05	+0 39.16	+10.71	-0.52	-13.45	6 3 38.75	52 1 8.2
6 2 27.0	7.0	3 12.68	3 45.1	17 18.40	-26.61	+0 39.16	+10.47	-0.52	-13.45	6 4 0.89	52 2 29.9

ZONE 219, FEBRUARY 22, 1873.

5 27 23.6	8.8	28 6.32	27 48.1	3 12.20	+15.18	+0 41.14	+ 8.91	-0.05	-13.95	5 28 56.74	50 17 23.2
5 29 6.2	7.7	29 50.88	29 31.7	50 48.10	+15.26	+0 41.18	+11.37	-0.08	-14.60	5 30 41.58	52 29 48.8
5 31 23.2	9.2	32 8.60	31 41.6	11 45.90	+21.63	+0 41.17	+10.89	-0.10	-14.45	5 32 59.23	52 8 56.7
5 32 41.7	8.6	33 26.44	33 4.4	42 40.60	+17.43	+0 41.18	+11.54	-0.12	-14.60	5 34 17.13	52 37 58.0
5 34 29.0	8.5	35 11.72	34 41.6	45 12.30	+24.95	+0 41.14	+ 9.01	-0.12	-14.00	5 36 2.12	50 35 31.6
5 35 33.0	6.8	36 16.28	35 53.1	52 34.05	+18.87	+0 41.16	+10.18	-0.14	-14.25	5 37 6.78	51 28 4.5
5 36 54.0	8.9	37 37.68	37 6.5	50 59.35	+24.80	+0 41.18	+11.22	-0.16	-14.55	5 38 28.32	52 29 45.6
5 39 27.0	6.0	40 9.98	39 42.1	52 16.40	+22.69	+0 41.17	+10.15	-0.18	-14.20	5 41 0.46	51 28 25.4

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
5 41 17.2	8.5	42 1.56	41 31.9	36 17.55	+23.47	+0 41.19	+11.50	-0.21	-14.55	5 42 52.19	52 44 25.7
5 44 6.7	9.0	44 49.28	44 24.0	19 43.05	+21.22	+0 41.14	+ 8.54	-0.21	-13.70	5 45 39.54	50 0 55.3
5 48 21.4	8.5	49 7.48	48 48.3	0 49.10	+15.31	+0 41.18	+11.15	-0.28	-14.30	5 49 57.99	52 19 44.6
5 49 5.4	9.0	49 51.00	49 45.7	22 1.00	+ 4.45	+0 41.14	+ 8.59	-0.25	-13.65	5 50 41.22	49 58 19.7
5 49 22.6	8.0	50 4.94	50 20.3	22 1.00	-12.93	+0 41.14	+ 8.54	-0.26	-13.60	5 50 55.15	49 58 2.3
5 51 12.4	9.0	51 57.96	51 26.8	11 1.40	+25.55	+0 41.16	+ 9.68	-0.29	-13.90	5 52 48.29	51 9 41.0
5 53 29.5	8.7	54 14.70	53 52.6	29 15.55	+17.82	+0 41.15	+ 8.41	-0.30	-13.50	5 55 4.86	49 51 17.8
5 55 52.6	8.5	56 36.64	56 11.4	23 41.35	+21.17	+0 41.15	+ 8.47	-0.32	-13.45	5 57 26.80	49 56 55.1
5 57 3.4	8.7	57 44.24	57 24.1	34 12.45	+16.59	+0 41.16	+ 9.48	-0.34	-13.75	5 58 34.48	50 46 19.9
5 57 45.3	8.4	58 31.44	58 13.5	33 43.55	+14.13	+0 41.20	+ 9.49	-0.38	-14.30	5 59 21.92	52 46 45.7
6 0 7.8	7.0	0 52.50	0 34.5	40 18.80	+14.25	+0 41.20	+11.57	-0.40	-14.20	6 1 42.95	52 40 12.3
6 1 36.3	8.7	2 22.30	1 59.0	24 24.50	+18.33	+0 41.21	+11.97	-0.42	-14.20	6 3 12.77	52 56 10.8
6 5 35.3	8.4	6 22.34	6 11.6	57 57.90	+ 8.53	+0 41.19	+11.38	-0.45	-14.00	6 7 12.69	52 22 26.5
6 8 26.4	9.0	9 8.92	8 49.6	18 27.55	+15.84	+0 41.18	+ 9.77	-0.46	-13.50	6 9 59.08	51 2 2.6
6 9 15.7	7.5	10 1.30	9 36.7	8 45.70	+19.68	+0 41.20	+11.07	-0.48	-13.90	6 10 51.61	52 11 49.0
6 14 2.1	9.6	14 46.68	14 35.8	28 32.60	+ 8.98	+0 41.18	+ 9.65	-0.51	-13.35	6 15 36.77	50 51 49.8
6 15 43.6	8.5	16 29.04	16 13.0	43 17.40	+12.68	+0 41.21	+11.64	-0.55	-13.80	6 17 19.34	52 37 9.9
6 17 2.4	9.1	17 46.28	17 32.5	59 36.50	+11.41	+0 41.17	+ 9.07	-0.53	-13.15	6 18 36.28	50 20 47.4
6 19 32.8	8.5	20 19.34	19 57.8	27 53.10	+17.14	+0 41.23	+11.88	-0.60	-13.80	6 21 9.63	52 52 38.2
6 19 44.7	8.6	20 33.77	21 9.3	27 53.10	-28.29	+0 41.23	+11.67	-0.60	-13.80	6 21 24.06	52 51 52.6
6 21 7.8	...	21 54.34	21 37.2	46 52.20	+13.57	+0 41.22	+11.53	-0.61	-13.65	6 22 44.57	52 33 35.1
6 22 21.1	9.0	23 7.18	22 50.6	47 16.50	+13.20	+0 41.22	+11.58	-0.62	-13.65	6 23 57.40	52 33 10.2
6 22 21.1	8.3	23 7.18	22 54.7	47 16.50	+ 9.92	+0 41.22	+11.55	-0.62	-13.65	6 23 57.40	52 33 7.0
6 25 31.7	8.9	26 18.98	25 59.7	43 2.80	+15.30	+0 41.22	+11.62	-0.65	-13.55	6 27 9.17	52 37 25.6
6 26 35.7	9.4	27 20.06	27 0.8	27 21.10	+15.81	+0 41.19	+ 9.57	-0.62	-13.05	6 28 10.04	50 53 6.1
6 28 27.5	8.5	29 14.56	28 52.0	15 15.45	+18.13	+0 41.21	+10.87	-0.67	-13.30	6 30 4.65	52 5 14.9
6 29 18.7	8.0	30 3.32	29 44.0	14 37.80	+15.48	+0 41.21	+11.06	-0.68	-13.30	6 30 53.40	52 5 49.8
6 30 50.6	8.3	31 33.98	31 15.5	54 52.60	+15.30	+0 41.18	+ 9.16	-0.65	-12.80	6 32 23.86	50 25 33.2
6 31 53.9	8.7	32 37.78	32 28.0	9 43.80	+ 8.19	+0 41.17	+ 8.91	-0.66	-12.70	6 33 27.61	50 10 34.6
ZONE 220, FEBRUARY 24, 1873.											
5 31 23.2	9.3	32 8.90	31 49.2	11 39.55	+15.78	+0 40.98	+11.17	-0.05	-14.60	5 32 59.39	52 8 56.4
5 32 41.7	8.7	33 26.60	33 6.3	42 38.35	+16.08	+0 40.99	+11.78	-0.06	-14.65	5 34 17.16	52 37 58.2
5 34 29.0	8.9	35 11.78	34 55.6	44 59.30	+13.43	+0 40.95	+ 9.31	-0.07	-14.10	5 36 2.04	50 35 32.4
5 35 33.0	7.0	36 16.54	36 1.9	52 26.50	+11.87	+0 40.97	+10.39	-0.08	-14.35	5 37 6.91	51 28 4.3
5 36 54.0	9.0	37 37.72	37 21.6	50 46.45	+12.79	+0 40.99	+11.56	-0.11	-14.65	5 38 28.22	52 29 45.9
5 39 27.0	6.3	40 10.14	39 48.4	52 11.30	+17.65	+0 40.98	+10.32	-0.13	-14.25	5 41 0.48	51 28 24.6
5 41 17.2	8.7	42 1.78	41 39.2	36 11.00	+17.86	+0 41.00	+11.80	-0.16	-14.70	5 42 52.27	52 44 25.8
5 41 47.8	8.5	42 28.64	42 48.0	4 24.35	-16.19	+0 40.95	+ 9.11	-0.14	-13.95	5 43 18.80	50 15 36.4
5 44 6.7	9.3	44 49.24	44 34.4	19 33.90	+12.41	+0 40.95	+ 8.77	-0.16	-13.85	5 45 39.36	50 0 54.8
5 46 14.4	9.0	47 0.68	46 37.6	11 25.05	+18.50	+0 40.99	+11.15	-0.20	-14.45	5 47 51.05	52 9 11.2
5 47 45.2	9.2	48 29.46	48 12.1	39 52.80	+13.77	+0 41.00	+11.76	-0.22	-14.60	5 49 19.89	52 40 38.9
5 49 53.0	8.8	50 35.98	50 26.1	21 37.65	+ 8.31	+0 40.95	+ 8.68	-0.22	-13.75	5 51 26.04	49 58 45.9
5 51 12.4	9.0	51 58.24	51 43.3	10 47.10	+12.20	+0 40.97	+ 8.88	-0.24	-14.10	5 52 48.43	51 9 40.0
5 53 29.5	9.0	54 14.92	53 53.3	29 15.45	+17.42	+0 40.95	+ 8.51	-0.25	-13.70	5 55 4.93	49 51 16.5
5 57 3.4	8.8	57 44.52	57 27.6	34 8.00	+13.95	+0 40.96	+ 9.60	-0.29	-13.90	5 58 34.61	50 46 20.8
5 57 45.3	8.9	58 31.60	58 8.6	33 46.60	+18.16	+0 41.00	+ 9.54	-0.33	-14.45	5 59 21.93	52 46 45.6
6 0 7.8	6.5	0 52.54	0 30.7	40 20.85	+17.26	+0 41.00	+11.70	-0.35	-14.40	6 1 42.84	52 40 12.3
6 1 36.3	9.1	2 22.54	2 5.0	24 18.65	+13.77	+0 41.01	+12.18	-0.37	-14.40	6 3 12.86	52 56 11.2
6 8 26.4	9.0	9 9.24	8 46.8	18 29.00	+18.39	+0 40.97	+ 9.86	-0.41	-13.75	6 9 59.24	51 2 2.6
6 9 15.7	8.8	10 1.48	9 41.6	8 40.95	+15.92	+0 40.99	+11.29	-0.44	-14.10	6 10 51.62	52 11 49.1
6 14 2.1	9.7	14 46.86	14 26.9	28 38.20	+16.48	+0 40.97	+ 9.69	-0.46	-13.60	6 15 36.79	50 51 50.5
6 15 43.6	8.8	16 29.18	16 14.0	43 14.95	+12.02	+0 41.00	+11.81	-0.51	-14.05	6 17 19.31	52 37 10.7

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	' "
6 17 2.4	9.1	17 46.56	17 27.5	59 40.50	+15.91	+0 40.96	+ 9.13	-0.48	-13.35	6 18 36.40	50 20 46.8
6 19 32.8	8.4	20 19.48	19 52.7	27 58.05	+21.12	+0 41.02	+11.97	-0.55	-14.00	6 21 9.61	52 52 36.2
6 19 44.7	8.5	20 33.82	21 1.2	27 58.05	-21.59	+0 41.02	+11.88	-0.55	-14.00	6 21 23.95	52 51 53.4
6 22 21.1	8.9	23 7.30	22 34.0	47 27.00	+26.43	+0 41.01	+11.46	-0.57	-13.85	6 23 57.36	52 33 11.7
6 22 21.1	8.0	23 7.30	22 39.0	47 28.00	+22.46	+0 41.01	+11.55	-0.57	-13.85	6 23 57.36	52 33 6.8
6 23 33.6	8.0	24 17.22	24 1.6	23 5.45	+12.27	+0 41.02	+12.16	-0.59	-13.95	6 25 7.32	52 57 19.5
6 25 31.7	9.0	26 19.22	26 2.9	42 59.10	+12.92	+0 41.01	+11.81	-0.61	-13.80	6 27 9.24	52 37 26.0
6 26 35.7	9.2	27 20.40	26 59.2	27 20.40	+13.87	+0 40.98	+ 9.66	-0.58	-13.30	6 28 10.21	50 53 3.8
6 28 27.5	8.8	29 14.78	29 0.1	15 9.40	+11.79	+0 41.00	+11.11	-0.62	-13.55	6 30 4.71	52 5 13.7
6 29 18.7	8.0	30 3.58	29 55.3	14 27.95	+ 6.66	+0 41.00	+11.29	-0.63	-13.55	6 30 53.50	52 5 49.9
6 30 50.6	8.6	31 34.22	31 10.0	54 56.05	+20.13	+0 40.97	+ 9.03	-0.61	-13.05	6 32 23.93	50 25 33.3
6 31 53.9	9.0	32 38.06	32 10.1	9 58.85	+23.41	+0 40.96	+ 8.70	-0.62	-12.95	6 33 27.72	50 10 33.3
ZONE 221, FEBRUARY 25, 1873.											
6 14 16.9	9.1	15 0.38	14 45.9	9 49.60	+12.12	+0 41.16	+ 8.77	-0.43	-13.50	6 15 50.45	50 10 33.9
6 16 1.2	9.0	16 46.96	16 29.1	25 4.05	+14.09	+0 41.21	+11.66	-0.49	-14.20	6 17 37.35	52 55 23.3
6 17 15.8	6.9	17 59.64	17 41.3	49 14.20	+14.54	+0 41.20	+11.38	-0.50	-14.05	6 18 49.96	52 31 13.3
6 18 54.2	7.9	19 40.80	19 18.4	27 15.25	+17.64	+0 41.16	+11.74	-0.50	-14.05	6 20 31.12	52 53 15.4
6 19 32.8	8.7	20 19.38	19 58.9	27 52.45	+16.15	+0 41.20	+11.80	-0.53	-14.05	6 21 9.71	52 52 36.6
6 19 44.7	8.7	20 33.66	21 9.7	27 52.45	-28.37	+0 41.20	+11.56	-0.53	-14.05	6 21 23.99	52 51 51.9
6 23 33.6	8.0	24 16.94	24 3.4	23 2.90	+10.62	+0 41.21	+11.84	-0.57	-14.05	6 25 7.25	52 57 20.0
6 25 51.3	9.2	26 37.78	26 18.7	44 33.45	+15.49	+0 41.18	+10.35	-0.57	-13.60	6 27 27.89	51 35 52.9
6 26 56.3	8.3	27 41.94	27 17.1	14 2.90	+19.89	+0 41.20	+10.85	-0.59	-13.70	6 28 32.10	52 6 28.1
6 28 53.7	8.8	29 39.92	29 15.7	25 39.85	+19.05	+0 41.22	+11.63	-0.62	-13.85	6 30 30.17	52 54 50.6
6 30 50.9	8.8	31 33.94	31 19.6	25 13.25	+12.02	+0 41.16	+ 8.30	-0.58	-12.95	6 32 23.81	49 55 7.4
6 31 45.8	8.0	32 28.42	32 17.4	55 13.20	+ 9.15	+0 41.17	+ 8.90	-0.60	-13.10	6 33 18.34	50 25 4.8
6 34 7.7	8.6	34 51.42	34 35.5	6 35.45	+12.71	+0 41.20	+10.99	-0.66	-13.50	6 35 41.51	52 13 47.4
6 35 6.7	8.8	35 52.10	35 26.5	7 17.45	+20.47	+0 41.20	+10.90	-0.67	-13.50	6 36 42.18	52 13 13.0
6 36 22.2	8.7	37 6.70	36 51.2	57 15.90	+12.35	+0 41.21	+11.20	-0.68	-13.50	6 37 56.80	52 23 6.5
6 37 29.0	9.0	38 18.14	38 4.7	27 9.20	+10.80	+0 41.22	+11.76	-0.71	-13.60	6 39 8.28	52 53 11.9
6 39 18.4	8.5	40 0.04	39 48.5	3 33.50	+ 9.59	+0 41.17	+ 8.87	-0.67	-12.85	6 40 49.85	50 16 43.9
6 40 8.2	8.2	40 52.02	40 29.7	39 42.00	+18.44	+0 41.17	+ 9.28	-0.68	-12.95	6 41 41.87	50 40 44.4
6 41 17.9	8.9	42 1.22	41 32.1	15 44.50	+24.37	+0 41.17	+ 8.33	-0.68	-12.75	6 42 50.99	50 4 46.9
6 42 17.2	9.2	43 4.48	42 45.3	39 22.95	+15.19	+0 41.21	+11.58	-0.75	-13.40	6 43 54.53	52 41 1.7
6 44 38.5	9.0	45 23.34	45 8.9	56 17.15	+11.47	+0 41.21	+11.19	-0.76	-13.25	6 46 13.34	52 24 3.2
6 45 14.6	9.1	45 58.30	45 47.2	59 14.10	+ 9.25	+0 41.17	+ 8.98	-0.72	-12.70	6 46 48.05	50 21 2.2
6 55 59.6	8.4	56 44.02	56 19.4	21 15.80	+19.78	+0 41.21	+10.67	-0.86	-12.75	6 57 33.83	51 59 10.9
6 56 49.7	8.7	57 34.96	57 17.0	27 48.55	+14.18	+0 41.23	+11.74	-0.89	-12.95	6 58 24.86	52 52 33.2
6 58 1.0	8.8	58 46.36	58 20.5	6 31.55	+20.71	+0 41.21	+10.89	-0.88	-12.75	6 59 36.17	52 13 56.0
6 59 12.9	9.4	59 55.88	59 40.6	0 7.25	+12.75	+0 41.18	+ 8.78	-0.84	-12.20	7 0 45.48	50 20 10.5
7 1 58.3	8.6	2 43.28	2 33.9	28 12.05	+ 7.41	+0 41.22	+11.70	-0.88	-12.75	7 3 33.16	52 52 2.3
7 3 20.3	9.2	4 5.34	3 53.3	34 59.40	+ 9.48	+0 41.22	+11.54	-0.94	-12.70	7 4 55.14	52 45 16.6
7 4 58.9	8.5	5 41.88	5 31.2	1 46.05	+ 8.92	+0 41.18	+ 8.85	-0.89	-11.95	7 6 31.40	50 18 27.2
7 6 9.8	5.8	6 55.08	6 38.0	59 23.90	+13.63	+0 41.22	+11.24	-0.96	-12.45	7 7 44.80	52 20 55.8
7 7 11.1	8.5	7 52.52	7 23.5	37 2.75	+23.97	+0 41.18	+ 9.14	-0.92	-12.00	7 8 42.05	50 43 25.4
7 8 6.8	8.1	8 52.12	8 35.0	8 50.40	+13.69	+0 41.21	+11.04	-0.97	-12.35	7 9 41.79	52 11 28.9
7 9 18.0	9.1	10 2.66	9 43.5	17 22.80	+15.41	+0 41.21	+10.48	-0.98	-12.25	7 10 52.30	52 2 57.6
ZONE 222, MARCH 4, 1873.											
6 14 16.9	9.2	14 55.53	15 10.0	9 27.60	-11.79	+0 45.86	+ 9.07	-0.27	-14.10	6 15 50.46	50 10 33.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	s	s	"	h m s	° ' "
6 16 1.2	9.2	16 42.22	16 24.7	25 6.10	+13.77	+0 45.91	+12.03	-0.31	-14.85	6 17 37.49	52 55 22.1
6 17 15.8	8.0	17 54.80	17 34.1	49 18.00	+16.44	+0 45.90	+11.71	-0.32	-14.70	6 18 50.00	52 31 12.5
6 18 54.2	8.0	19 35.98	19 11.8	27 17.05	+19.06	+0 45.86	+12.12	-0.34	-14.75	6 20 31.16	52 53 16.1
6 19 32.8	8.5	20 14.64	20 2.1	27 47.95	+ 9.85	+0 45.91	+12.22	-0.35	-14.70	6 21 9.86	52 52 36.0
6 19 44.7	8.6	20 28.82	21 9.7	27 47.95	-32.23	+0 45.91	+11.83	-0.35	-14.70	6 21 24.04	52 51 53.5
6 23 33.6	8.1	24 12.16	23 48.8	23 10.95	+18.40	+0 45.91	+12.17	-0.39	-14.75	6 25 7.35	52 57 20.8
6 25 51.3	9.0	26 33.00	26 25.6	44 24.50	+ 6.00	+0 45.89	+11.77	-0.39	-14.30	6 27 28.00	51 35 54.5
6 26 56.3	8.0	27 37.02	27 25.7	13 54.55	+ 9.06	+0 45.90	+11.30	-0.42	-14.40	6 28 32.05	52 6 26.8
6 28 53.7	8.7	29 35.24	29 5.6	25 48.65	+23.30	+0 45.92	+11.94	-0.45	-14.60	6 30 30.36	52 54 47.0
6 30 50.9	9.0	31 29.04	31 9.2	25 18.10	+16.64	+0 45.87	+ 8.54	-0.42	-13.70	6 32 23.78	49 55 8.1
6 31 45.8	8.6	32 23.68	32 5.2	55 21.30	+15.39	+0 45.88	+ 9.16	-0.44	-13.80	6 33 18.47	50 25 4.0
6 34 7.7	8.5	34 46.78	34 7.0	6 55.10	+31.83	+0 45.90	+11.00	-0.49	-14.20	6 35 41.74	52 13 47.6
6 34 7.7	9.1	34 47.92	34 7.0	6 55.10	+32.71	+0 45.90	+10.97	-0.49	-14.20	6 35 42.88	52 13 48.5
6 36 22.2	8.7	37 2.00	37 16.1	56 53.25	-10.99	+0 45.91	+11.54	-0.52	-14.30	6 37 56.96	52 23 6.7
6 37 29.0	8.9	38 13.32	37 54.7	27 15.95	+14.65	+0 45.92	+12.12	-0.54	-14.40	6 39 8.33	52 53 10.0
6 39 18.4	8.6	39 55.32	39 39.1	3 38.60	+13.51	+0 45.87	+ 9.15	-0.51	-13.60	6 40 49.99	50 16 43.7
6 40 8.2	8.5	40 47.26	40 28.8	39 40.60	+15.30	+0 45.88	+ 9.64	-0.53	-13.70	6 41 41.97	50 40 43.7
6 41 17.9	8.6	41 56.38	41 34.5	15 39.35	+18.34	+0 45.87	+ 8.73	-0.53	-13.50	6 42 51.00	50 4 47.1
6 42 17.2	9.2	42 59.68	42 43.7	39 22.55	+12.66	+0 45.91	+11.99	-0.58	-14.20	6 43 54.60	52 41 0.6
6 44 38.5	9.0	45 18.62	44 44.0	56 35.95	+27.56	+0 45.91	+11.31	-0.60	-14.10	6 46 13.48	52 24 1.1
6 45 14.6	9.1	45 53.70	45 49.2	59 10.05	+ 3.75	+0 45.88	+ 9.31	-0.57	-13.50	6 46 48.31	50 21 1.7
6 47 14.9	8.0	47 53.60	47 40.5	18 7.90	+10.52	+0 45.90	+11.21	-0.62	-13.90	6 48 48.37	52 2 11.8
6 48 13.9	7.1	48 53.12	48 30.6	36 10.55	+17.78	+0 45.91	+11.86	-0.64	-14.10	6 49 47.96	52 44 16.7
6 50 17.2	9.0	50 53.82	50 44.2	11 45.45	+ 8.03	+0 45.91	+ 8.93	-0.61	-13.25	6 51 48.38	50 8 29.6
6 53 1.0	9.0	53 42.50	53 21.8	15 42.70	+16.60	+0 45.90	+11.08	-0.68	-13.75	6 54 37.20	52 4 42.1
6 54 35.3	8.8	55 14.90	54 56.2	33 41.20	+15.43	+0 45.89	+ 9.71	-0.65	-13.35	6 56 9.46	50 46 41.2
6 55 59.6	8.7	56 39.12	56 17.5	21 16.55	+17.36	+0 45.90	+10.99	-0.70	-13.60	6 57 33.78	51 59 8.6
6 56 49.7	...	57 30.30	57 13.9	27 50.05	+12.92	+0 45.93	+12.14	-0.73	-13.85	6 58 25.06	52 52 31.4

ZONE 223, MARCH 5, 1873.

6 14 16.9	9.0	14 54.86	15 2.5	9 31.90	- 6.35	+0 46.50	+ 9.11	-0.24	-14.15	6 15 50.46	50 10 33.9
6 16 1.2	9.2	16 41.38	16 26.1	25 2.25	+12.04	+0 46.55	+12.11	-0.29	-14.90	6 17 37.31	52 55 23.9
6 17 15.8	7.7	17 54.10	17 31.4	49 17.95	+18.03	+0 46.55	+11.73	-0.29	-14.80	6 18 49.98	52 31 13.7
6 18 54.2	8.6	19 35.35	19 21.6	27 8.60	+10.87	+0 46.51	+12.26	-0.31	-14.80	6 20 31.21	52 53 16.1
6 19 32.8	8.7	20 13.84	20 6.9	27 42.40	+ 5.42	+0 46.56	+12.31	-0.33	-14.80	6 21 9.73	52 52 36.8
6 19 44.7	8.8	20 28.20	21 16.6	27 42.40	-38.14	+0 46.56	+11.72	-0.33	-14.80	6 21 24.09	52 51 52.6
6 21 7.8	9.4	21 48.92	22 6.8	46 20.75	-14.20	+0 46.54	+11.70	-0.34	-14.75	6 22 44.74	52 33 38.0
6 23 33.6	8.3	24 11.27	23 56.4	23 4.30	+11.72	+0 46.56	+12.28	-0.37	-14.80	6 25 7.13	52 57 20.5
6 25 51.3	9.2	26 32.02	.....	.....	.....	+0 46.54	.....	-0.37	.....	6 27 27.69	.....
6 26 56.3	8.0	27 36.22	27 17.2	13 59.55	+15.23	+0 46.53	+11.29	-0.39	-14.50	6 28 31.91	52 6 27.4
6 28 53.7	8.8	29 34.26	29 18.1	25 36.35	+12.75	+0 46.56	+12.14	-0.42	-14.70	6 30 30.05	52 54 48.5
6 30 50.9	9.2	31 28.30	31 5.9	25 18.90	+18.83	+0 46.50	+ 8.54	-0.40	-13.75	6 32 23.69	49 55 9.0
6 34 7.7	8.8	34 45.94	34 6.1	6 53.55	+31.83	+0 46.54	+11.03	-0.47	-14.30	6 35 41.56	52 13 48.8
6 34 7.7	9.3	34 47.30	34 6.1	6 53.55	+32.95	+0 46.54	+10.99	-0.47	-14.30	6 35 42.92	52 13 49.8
6 35 6.7	8.9	35 46.64	35 27.0	7 13.05	+15.67	+0 46.54	+11.35	-0.48	-14.35	6 36 42.25	52 13 13.2
6 36 22.2	8.9	37 1.20	36 51.1	57 12.50	+ 8.08	+0 46.54	+11.43	-0.49	-14.35	6 37 56.82	52 23 6.0
6 37 29.0	9.2	38 12.74	37 55.6	27 11.45	+13.47	+0 46.56	+12.17	-0.51	-14.50	6 39 8.42	52 53 12.8
6 39 18.4	8.9	39 54.50	39 46.5	3 31.10	+ 6.67	+0 46.50	+ 9.21	-0.49	-13.70	6 40 49.82	50 16 43.9
6 40 8.2	8.8	40 46.44	40 36.3	39 32.05	+ 8.35	+0 46.51	+ 9.73	-0.50	-13.80	6 41 41.81	50 40 44.9
6 41 17.9	8.7	41 55.72	41 42.6	15 30.60	+10.97	+0 46.52	+ 8.83	-0.50	-13.60	6 42 51.02	50 4 48.1
6 42 17.2	9.2	42 58.98	42 46.5	39 18.45	+ 9.89	+0 46.55	+12.06	-0.56	-14.35	6 43 54.56	52 41 1.5
6 44 38.5	9.0	45 17.80	45 0.0	56 19.05	+14.18	+0 46.56	+11.56	-0.58	-14.20	6 46 13.33	52 24 4.4
6 45 14.6	8.9	45 52.90	45 50.1	59 8.55	+ 2.33	+0 46.51	+ 9.35	-0.55	-13.60	6 46 48.16	50 21 1.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R.A.	Dec.		
h m s		m s	m s	° "	"	m s	"	s	"	h m s	° ' "
6 47 14.9	8.2	47 52.84	47 39.6	18 9.55	+10.60	+0 46.54	+11.24	-0.60	-14.00	6 48 48.27	52 2 9.8
6 48 13.9	6.9	48 52.26	48 48.2	34 55.75	+ 3.24	+0 46.57	+12.00	-0.62	-14.20	6 49 47.78	52 44 16.6
6 50 56.6	9.2	51 35.56	51 20.5	50 25.90	+12.27	+0 46.54	+10.45	-0.64	-13.80	6 52 30.88	51 29 53.9
6 53 1.0	9.1	53 41.66	53 28.7	15 34.35	+10.43	+0 46.55	+11.19	-0.66	-13.85	6 54 37.03	52 4 43.9
6 55 59.6	8.4	56 38.38	56 25.5	21 7.90	+10.37	+0 46.54	+11.12	-0.68	-13.75	6 57 33.70	51 59 9.9
6 56 49.7	8.8	57 29.36	57 35.2	27 29.95	- 4.65	+0 46.55	+12.25	-0.71	-13.95	6 58 24.76	52 52 33.6
6 59 12.9	9.3	59 50.30	59 42.0	59 59.45	+ 6.92	+0 46.53	+ 9.16	-0.68	-13.15	7 0 45.41	50 20 12.9
7 1 58.3	8.9	2 37.74	2 20.2	28 18.75	+13.79	+0 46.56	+12.10	-0.72	-13.75	7 3 33.12	52 52 2.4
7 3 20.3	9.1	3 59.84	3 37.3	35 7.90	+17.78	+0 46 57	+11.88	-0.77	-13.75	7 4 55.16	52 45 16.8
7 4 58.9	8.8	5 36.30	5 21.4	1 49.45	+12.42	+0 46.53	+ 9.15	-0.73	-13.00	7 6 31.33	50 18 27.6
7 6 9.8	6.7	6 49.56	6 40.3	59 16.30	+ 7.42	+0 46.57	+11.68	-0.79	-13.55	7 7 44.80	52 20 57.5
7 7 11.1	8.3	7 47.10	7 22.1	36 59.65	+20.66	+0 46.54	+ 9.54	-0.76	-13.05	7 8 42.15	50 43 25.6
7 8 6.8	8.2	8 46.42	8 31.9	8 48.45	+11.60	+0 46.56	+11.45	-0.80	-13.40	7 9 41.61	52 11 29.2
7 9 18.0	8.9	9 57.13	9 33.0	17 27.80	+19.35	+0 46.56	+11.19	-0.81	-13.35	7 10 52.29	52 2 57.2
ZONE 224, MARCH 6, 1873.											
6 45 32.0	9.2	46 9.06	45 55.3	10 44.95	+11.54	+0 47.24	+ 8.87	-0.52	-13.60	6 47 5.06	50 9 33.9
6 46 8.7	9.0	46 47.14	46 33.7	54 36.30	+10.66	+0 47.27	+11.70	-0.57	-14.25	6 47 43.38	52 25 43.8
6 48 13.9	6.6	48 51.56	48 35.1	36 6.45	+13.04	+0 47.27	+11.88	-0.59	-14.30	6 49 47.81	52 44 15.8
6 49 39.4	9.3	50 17.86	50 16.4	25 1.75	+ 1.18	+0 47.27	+10.97	-0.60	-14.00	6 51 14.00	51 55 7.8
6 50 2.2	8.2	50 40.76	50 6.8	25 1.75	+27.37	+0 47.27	+10.84	-0.60	-14.00	6 51 36.90	51 55 33.8
6 51 5.9	8.3	51 41.74	51 23.9	5 19.60	+14.86	+0 47.24	+ 8.91	-0.58	-13.40	6 52 37.68	50 15 1.9
6 53 21.3	8.8	54 2.06	53 46.8	24 32.55	+12.04	+0 47.29	+12.26	-0.65	-14.20	6 54 58.28	52 55 48.3
6 54 11.5	9.2	54 51.22	54 34.4	14 24.20	+13.47	+0 47.28	+11.29	-0.64	-13.95	6 55 47.34	52 5 57.2
6 56 28.2	9.3	57 6.26	56 53.1	55 28.90	+10.75	+0 47.27	+10.34	-0.65	-13.65	6 58 2.26	51 24 48.8
6 57 32.8	9.0	58 9.42	57 49.4	23 21.35	+16.80	+0 47.24	+ 8.67	-0.64	-13.25	6 59 5.24	49 57 0.9
6 58 52.0	...	59 28.54	59 6.8	27 26.75	+18.25	+0 47.24	+ 8.53	-0.64	-13.15	7 0 24.35	49 52 56.7
7 0 57.8	8.9	1 36.61	1 21.2	48 25.15	+12.86	+0 47.14	+ 9.41	-0.63	-13.50	7 2 32.39	50 31 53.1
7 5 12.3	8.5	5 50.96	5 37.2	5 10.00	+10.53	+0 47.28	+11.33	-0.76	-13.65	7 6 46.93	52 15 7.0
7 6 25.8	9.1	7 4.76	6 39.1	9 44.00	+20.57	+0 47.28	+11.30	-0.77	-13.60	7 8 0.71	52 10 42.8
7 8 27.1	9.0	9 3.44	8 58.2	17 37.15	+ 4.36	+0 47.24	+ 8.84	-0.74	-12.90	7 9 59.14	50 2 31.4
7 10 42.3	8.7	11 20.84	11 15.0	19 25.40	+ 4.87	+0 47.25	+ 8.89	-0.76	-12.85	7 12 16.51	50 0 43.3
7 11 44.0	8.8	12 19.94	12 3.1	21 17.35	+14.10	+0 47.26	+ 8.65	-0.77	-12.80	7 13 15.60	49 59 0.3
7 13 31.8	9.1	14 9.14	13 55.1	12 9.95	+11.71	+0 47.26	+ 8.91	-0.79	-12.75	7 15 4.79	50 8 5.3
7 14 31.9	8.8	15 11.84	14 54.7	23 37.00	+13.45	+0 47.30	+12.21	-0.87	-13.45	7 16 7.76	52 56 42.4
7 17 14.0	8.8	17 51.14	17 42.2	15 14.25	+ 7.30	+0 47.27	+ 9.96	-0.84	-12.90	7 18 46.83	51 4 56.8
7 17 54.6	9.1	18 31.58	18 43.4	19 52.95	- 9.70	+0 47.27	+ 9.86	-0.85	-12.85	7 19 27.25	51 0 1.0
7 18 57.5	6.0	19 30.86	19 47.1	24 6.75	-13.61	+0 47.25	+ 8.71	-0.83	-12.50	7 20 26.41	49 55 42.3
7 20 2.3	8.0	20 37.76	20 29.7	1 49.15	+ 6.75	+0 47.26	+ 9.12	-0.85	-12.60	7 21 33.33	50 18 20.4
7 21 13.7	9.1	21 52.12	22 17.7	25 36.95	-20.15	+0 47.31	+11.97	-0.93	-13.25	7 22 47.95	52 54 7.7
7 23 14.8	8.6	23 52.74	23 32.6	8 10.05	+16.08	+0 47.30	+11.34	-0.93	-13.00	7 24 48.47	52 12 10.1
7 24 15.8	8.8	24 54.08	24 35.1	51 49.60	+15.10	+0 47.30	+11.60	-0.95	-13.00	7 25 49.81	52 28 29.7
7 26 12.8	9.0	26 52.20	26 27.0	30 2.00	+19.87	+0 47.31	+11.88	-0.97	-13.05	7 27 47.95	52 50 22.0
7 27 23.2	9.1	28 0.70	27 39.5	25 59.40	+17.82	+0 47.26	+ 8.52	-0.91	-12.20	7 28 56.13	49 54 19.8
7 28 20.8	6.5	28 56.24	28 42.4	31 37.90	+11.37	+0 47.28	+ 9.67	-0.94	-12.40	7 29 51.75	50 48 35.7
7 30 20.7	10.0	30 56.04	30 40.7	18 45.85	+12.83	+0 47.27	+ 8.83	-0.94	-12.10	7 31 51.45	50 1 28.3
7 31 10.3	8.3	31 47.50	31 32.3	28 58.40	+12.52	+0 47.28	+ 9.82	-0.97	-12.30	7 32 42.97	50 51 16.1
7 32 41.8	8.4	33 20.14	33 10.7	23 34.25	+ 7.39	+0 47.31	+12.26	-1.04	-12.80	7 34 15.80	52 56 36.8
7 34 3.1	8.7	34 39.80	34 25.4	11 33.50	+11.79	+0 47.28	+10.06	-1.00	-12.25	7 35 35.26	51 8 40.1
7 37 15.4	9.1	37 53.46	37 28.5	45 49.05	+19.83	+0 47.30	+11.61	-1.07	-12.55	7 38 49.01	52 34 33.3
7 38 6.7	8.5	38 42.42	38 22.9	13 11.60	+15.63	+0 47.31	+11.25	-1.07	-12.35	7 39 37.92	52 7 6.3
7 39 51.4	8.4	40 29.92	40 12.4	54 11.00	+14.24	+0 47.31	+10.49	-1.06	-12.10	7 41 25.33	51 26 4.7
7 42 18.7	7.9	42 53.80	42 32.1	43 0.40	+17.59	+0 47.30	+10.63	-1.09	-12.00	7 43 49.19	51 37 18.5

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
7 44 29.7	8.6	45 7.66	44 59.4	30 0.80	+ 6.70	+0 47.30	+10.87	-1.11	-12.00	7 46 3.04	51 50 7.1
ZONE 225, MARCH 8, 1873.											
6 45 32.0	9.3	46 7.54	45 46.2	10 51.00	+17.81	+0 48.59	+ 8.31	-0.48	-13.80	6 47 4.93	50 9 33.4
6 46 8.7	9.1	46 45.80	46 36.7	54 33.40	+ 7.32	+0 48.62	+11.12	-0.52	-14.50	6 47 43.44	52 25 42.5
6 48 13.9	6.9	48 50.16	48 33.6	36 4.00	+13.12	+0 48.62	+11.21	-0.53	-14.50	6 49 47.82	52 44 17.4
6 49 39.4	9.2	50 16.40	50 0.6	25 12.85	+12.72	+0 48.61	+10.31	-0.54	-14.25	6 51 13.94	51 55 7.3
6 50 2.2	8.0	50 39.42	.....	.....	.....	+0 48.61	.....	-0.54	.....	6 51 36.96	.....
6 51 5.9	8.0	51 40.22	51 30.0	5 12.55	+ 8.51	+0 48.60	+ 8.49	-0.53	-13.70	6 52 37.57	50 15 1.8
6 53 21.3	8.7	54 0.62	53 36.8	24 38.35	+18.72	+0 48.63	+11.52	-0.60	-14.45	6 54 58.23	52 55 48.2
6 54 11.5	9.2	54 49.68	54 40.8	14 17.15	+ 7.06	+0 48.62	+10.76	-0.59	-14.20	6 55 47.19	52 5 57.0
6 56 28.2	9.3	57 5.07	56 41.8	55 35.05	+18.97	+0 48.61	+ 9.66	-0.60	-13.90	6 58 2.46	51 24 49.9
6 57 32.8	9.1	58 8.01	57 50.0	23 20.55	+15.12	+0 48.60	+ 8.23	-0.59	-13.45	6 59 5.24	49 56 59.4
6 58 52.0	9.0	59 27.18	59 8.4	27 23.10	+15.81	+0 48.60	+ 8.10	-0.60	-13.40	7 0 24.39	49 52 57.2
7 0 57.8	9.0	1 35.30	1 15.4	48 29.35	+16.43	+0 48.60	+ 8.88	-0.68	-13.30	7 2 32.49	50 31 52.1
7 2 29.1	8.6	3 3.60	2 47.7	34 21.00	+13.13	+0 48.61	+ 9.25	-0.65	-13.35	7 4 0.85	50 45 57.2
7 4 4.2	8.9	4 42.84	4 21.8	14 17.15	+16.84	+0 48.63	+10.66	-0.70	-13.90	7 5 40.21	52 6 5.4
7 5 12.3	8.0	5 49.52	5 36.1	5 8.10	+10.71	+0 48.63	+10.69	-0.71	-13.90	7 6 46.89	52 15 8.1
7 6 25.8	9.2	7 3.36	6 36.6	9 43.15	+21.45	+0 48.63	+10.71	-0.72	-13.85	7 8 0.71	52 10 43.7
7 8 27.1	9.0	9 2.20	8 47.5	17 42.20	+12.32	+0 48.61	+ 8.33	-0.69	-13.15	7 9 59.31	50 2 33.5
7 13 31.8	8.9	14 7.74	13 41.2	12 19.10	+22.17	+0 48.61	+ 8.29	-0.74	-13.00	7 15 4.79	50 8 5.7
7 24 15.8	8.0	24 52.60	24 51.8	51 33.95	+ 0.64	+0 48.65	+11.04	-0.90	-13.30	7 25 49.73	52 28 30.0
7 26 12.8	9.1	26 50.74	26 31.8	29 54.35	+14.90	+0 48.65	+11.30	-0.93	-13.30	7 27 47.87	52 50 23.8
7 27 23.2	9.0	27 59.36	27 40.9	25 56.35	+15.55	+0 48.62	+ 8.05	-0.86	-12.45	7 28 56.20	49 54 19.9
7 28 20.8	6.5	28 54.92	28 30.2	31 44.50	+20.37	+0 48.63	+ 9.08	-0.87	-12.70	7 29 51.85	50 48 37.2
7 30 20.7	10.0	30 54.78	30 47.0	18 38.05	+ 6.54	+0 48.63	+ 8.39	-0.89	-12.35	7 31 51.60	50 1 29.1
7 31 10.3	8.7	31 46.02	31 37.6	28 51.60	+ 6.92	+0 48.64	+ 9.37	-0.93	-12.60	7 32 42.89	50 51 16.6
7 33 1.9	9.3	33 39.60	33 14.9	26 8.05	+19.45	+0 48.66	+10.35	-1.00	-13.10	7 34 36.64	52 54 12.8
7 34 3.1	8.3	34 38.40	34 13.3	11 40.80	+20.55	+0 48.64	+ 8.39	-0.96	-12.55	7 35 35.26	51 8 39.6
7 37 15.4	9.0	37 52.20	37 31.7	45 45.00	+16.26	+0 48.66	+11.01	-1.03	-12.80	7 38 49.15	52 34 33.0
7 38 6.7	8.3	38 41.02	38 28.2	13 5.25	+10.26	+0 48.65	+10.69	-1.02	-12.65	7 39 37.91	52 7 6.4
7 39 51.4	8.4	40 28.54	40 0.0	54 19.00	+23.19	+0 48.65	+ 9.86	-1.02	-12.40	7 41 25.34	51 26 4.7
7 42 18.7	8.0	42 52.30	42 24.6	43 4.15	+22.45	+0 48.65	+10.02	-1.05	-12.30	7 43 49.08	51 37 18.7
7 44 29.7	9.0	45 6.38	44 45.6	30 9.05	+16.78	+0 48.65	+10.18	-1.07	-12.30	7 46 3.15	51 50 8.0
ZONE 226, MARCH 10, 1873.											
6 54 7.6	8.8	55 37.74	55 26.5	23 41.45	+ 8.89	-0 3.26	+11.21	-0.53	-14.25	6 55 43.53	52 56 34.7
6 56 32.5	9.0	58 0.04	57 34.3	51 21.75	+21.35	-0 3.31	+ 8.98	-0.54	-13.80	6 58 5.47	50 29 4.6
6 58 1.0	8.8	59 30.58	58 59.2	6 35.95	+25.10	-0 3.27	+10.91	-0.59	-14.30	6 59 36.20	52 13 55.4
6 58 52.4	9.1	0 19.12	0 0.8	7 13.75	+14.63	-0 3.28	+11.10	-0.59	-14.25	7 0 24.72	52 13 7.2
7 0 7.0	8.8	1 38.32	1 13.0	49 27.50	+20.10	-0 3.27	+11.45	-0.61	-14.30	7 1 43.94	52 30 59.0
7 1 58.3	8.8	3 27.52	3 9.9	28 19.10	+13.87	-0 3.27	+11.86	-0.64	-14.40	7 3 33.15	52 52 1.2
7 4 4.2	9.3	5 34.64	5 14.4	14 16.85	+16.20	-0 3.28	+11.04	-0.65	-14.05	7 5 40.15	52 6 4.9
7 6 40.2	9.4	8 12.68	7 53.6	19 34.30	+15.34	-0 3.29	+10.98	-0.68	-13.95	7 8 18.12	52 0 46.2
7 8 6.8	8.5	9 36.28	9 16.2	8 51.95	+16.09	-0 3.28	+11.12	-0.69	-14.00	7 9 41.74	52 11 29.2
7 9 31.5	8.0	11 0.78	10 40.6	50 38.10	+16.05	-0 3.28	+11.30	-0.71	-14.05	7 11 6.25	52 29 42.9
7 10 39.4	8.8	12 9.20	11 40.5	7 13.60	+22.95	-0 3.26	+10.97	-0.72	-13.95	7 12 14.64	52 13 13.8
7 11 50.4	8.5	13 21.52	13 0.0	49 38.70	+17.08	-0 3.27	+11.51	-0.73	-14.00	7 13 26.97	52 30 43.2
7 13 28.3	8.2	14 57.22	14 30.5	42 7.70	+21.15	-0 3.26	+11.46	-0.75	-13.95	7 15 2.67	52 38 18.0
7 14 31.9	9.0	16 2.10	15 39.2	23 38.15	+18.01	-0 3.26	+11.91	-0.77	-14.00	7 16 7.56	52 56 44.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.			Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.		R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"		s "		h m s	° ' "
7 16 29.3	8.0	17 57.84	17 36.6	43 26.75	+16.80	-0 3.26	+11.57	-0.78	-13.85		7 18 3.24	52 36 54.3
7 18 34.8	9.0	20 2.18	19 47.0	7 29.15	+12.70	-0 3.29	+ 8.81	-0.75	-13.10		7 20 7.30	50 12 45.3
7 18 51.8	9.0	20 20.90	.....	.....	.....	-0 3.29	.....	-0.75	.....		7 20 26.02	.....
7 18 51.8	9.0	20 22.22	.....	.....	.....	-0 3.29	.....	-0.75	.....		7 20 27.34	.....
7 20 5.8	8.5	21 35.10	21 27.0	26 34.75	+ 6.38	-0 3.25	+11.88	-0.82	-13.80		7 21 40.49	52 53 35.6
7 22 22.9	8.9	23 50.46	23 23.5	54 53.85	+22.46	-0 3.30	+ 9.03	-0.78	-13.05		7 23 55.54	50 25 30.2
7 24 22.3	9.3	25 51.96	25 20.5	56 54.45	+26.22	-0 3.26	+11.11	-0.86	-13.55		7 25 57.21	52 23 34.6
7 24 49.3	9.2	26 18.12	26 54.4	11 59.75	-29.09	-0 3.28	+10.67	-0.78	-13.45		7 26 23.40	52 7 33.5
7 26 50.9	8.9	28 18.96	28 2.7	6 44.45	+13.03	-0 3.26	+11.09	-0.88	-13.40		7 28 24.17	52 13 31.3
7 28 42.4	9.1	30 12.48	29 39.1	25 55.55	+26.30	-0 3.26	+11.62	-0.91	-13.50		7 30 17.72	52 54 33.4
7 30 19.4	8.6	31 46.84	31 23.0	6 26.55	+19.45	-0 3.28	+ 9.90	-0.88	-13.00		7 31 51.89	51 13 54.1
7 31 10.6	8.3	32 37.70	32 14.7	44 19.15	+18.23	-0 3.27	+11.59	-0.92	-13.35		7 32 42.87	52 36 1.5
7 33 4.7	5.6	34 30.82	34 7.1	36 42.45	+19.58	-0 3.29	+ 9.34	-0.89	-12.75		7 34 35.78	50 43 37.6
7 36 18.9	8.8	37 44.52	37 22.6	55 58.75	+18.21	-0 3.30	+ 8.90	-0.91	-12.50		7 37 49.40	50 24 19.1
7 37 50.3	8.5	39 19.00	38 39.2	31 13.15	+31.40	-0 3.26	+11.40	-1.00	-13.10		7 39 24.08	52 49 19.6
7 39 29.4	8.4	40 54.10	40 23.8	26 24.05	+24.94	-0 3.29	+ 9.43	-0.96	-12.55		7 40 58.97	50 54 0.6
7 41 29.2	9.2	42 56.60	42 10.4	5 56.55	+37.09	-0 3.25	+10.57	-1.02	-12.80		7 43 1.58	52 14 40.8
7 41 36.3	9.1	43 3.70	43 4.3	5 56.55	- 0.49	-0 3.25	+11.14	-1.02	-12.80		7 43 8.68	52 14 3.8
7 43 55.6	7.9	45 21.04	44 57.1	13 53.15	+20.01	-0 3.29	+ 8.69	-0.98	-12.15		7 45 25.78	50 6 25.5
7 56 11.3	8.9	57 38.82	57 13.0	59 44.95	+20.57	-0 3.25	+11.30	-1.15	-12.25		7 57 43.58	52 20 34.9
7 57 59.3	8.8	59 24.94	59 4.4	15 33.75	+17.16	-0 3.29	+ 8.53	-1.10	-11.50		7 59 29.47	50 4 40.4
8 0 4.3	8.8	1 29.54	1 16.3	11 18.75	+10.57	-0 3.26	+11.05	-1.18	-11.95		8 1 34.21	52 8 50.5
8 1 51.1	7.7	3 13.98	2 53.7	57 30.75	+16.90	-0 3.29	+ 9.00	-1.14	-11.40		8 3 18.47	50 22 43.3
ZONE 227, MARCH 13, 1873.												
6 56 32.5	8.7	57 58.60	57 40.6	51 15.50	+14.95	-0 2.05	+ 9.01	-0.46	-14.10		6 58 5.37	50 29 4.7
6 58 1.0	8.5	59 29.26	59 9.4	6 25.75	+15.91	-0 2.03	+10.99	-0.51	-14.55		6 59 36.20	52 13 56.7
6 58 52.4	9.0	0 17.84	0 0.6	7 15.45	+13.76	-0 2.02	+11.05	-0.52	-14.55		7 0 24.77	52 13 4.7
7 0 7.0	8.5	1 37.02	1 13.1	49 26.55	+18.98	-0 2.02	+11.41	-0.54	-14.60		7 1 43.96	52 30 58.9
7 1 58.3	8.7	3 26.12	3 15.5	28 11.00	+ 8.35	-0 2.01	+11.85	-0.56	-14.65		7 3 33.09	52 52 3.9
7 4 4.2	9.3	5 33.34	5 4.8	14 22.50	+22.85	-0 2.01	+10.89	-0.57	-14.40		7 5 40.20	52 6 5.9
7 6 40.2	9.2	8 11.10	7 45.5	19 39.35	+20.57	-0 2.02	+10.84	-0.61	-14.25		7 8 17.88	52 0 46.4
7 8 6.8	8.0	9 34.98	9 12.0	8 53.40	+18.41	-0 2.02	+11.04	-0.61	-14.30		7 9 41.78	52 11 30.1
7 9 31.5	7.8	10 59.42	10 42.5	50 35.40	+13.74	-0 2.00	+11.27	-0.63	-14.35		7 11 6.25	52 29 43.4
7 10 39.4	8.0	12 7.80	11 47.4	7 7.50	+16.31	-0 2.02	+11.02	-0.64	-14.25		7 12 14.56	52 13 13.5
7 11 50.4	8.0	13 20.14	13 1.4	49 35.95	+14.85	-0 2.01	+11.48	-0.66	-14.30		7 13 26.92	52 30 43.8
7 13 28.3	8.1	14 55.78	14 30.0	42 7.30	+20.44	-0 2.00	+11.42	-0.67	-14.25		7 15 2.57	52 38 17.8
7 14 31.9	8.8	16 0.66	15 42.5	23 35.90	+14.31	-0 2.01	+11.93	-0.70	-14.30		7 16 7.44	52 56 43.3
7 16 29.3	7.8	17 56.30	17 30.0	43 30.40	+20.84	-0 2.01	+11.45	-0.71	-14.15		7 18 3.02	52 36 54.7
7 18 51.8	9.2	20 19.46	20 1.4	6 31.70	+15.11	-0 2.03	+ 8.74	-0.68	-13.40		7 20 25.90	50 13 45.3
7 18 51.8	9.0	20 19.46	20 1.4	6 31.70	-10.85	-0 2.03	+ 8.77	-0.68	-13.40		7 20 27.22	50 13 19.3
7 19 16.0	7.3	20 40.04	.....	.....	.....	-0 2.03	.....	-0.68	.....		7 20 46.49	.....
7 20 5.8	8.0	21 33.76	21 28.4	26 32.45	+ 4.25	-0 2.01	+11.84	-0.75	-14.15		7 21 40.46	52 53 35.8
7 22 22.9	8.9	23 48.98	23 21.5	54 54.90	+22.88	-0 2.03	+ 9.01	-0.72	-13.35		7 23 55.39	50 25 29.6
7 24 22.3	9.2	25 50.44	25 23.1	56 52.50	+22.72	-0 2.01	+11.10	-0.78	-13.90		7 25 57.02	52 23 33.1
7 24 49.3	9.1	26 16.70	26 36.4	12 12.90	-15.78	-0 2.01	+10.98	-0.85	-13.80		7 26 23.18	52 7 34.1
7 26 50.9	8.7	28 17.60	27 44.4	6 58.00	+26.54	-0 2.00	+10.79	-0.80	-13.75		7 28 24.15	52 13 31.0
7 28 28.8	8.6	29 56.68	29 36.1	22 57.25	+16.19	-0 2.00	+11.84	-0.84	-13.90		7 30 3.25	52 57 21.9
7 30 19.4	8.0	31 45.36	31 23.3	6 26.00	+18.06	-0 2.02	+ 9.86	-0.81	-13.30		7 31 51.74	51 13 53.3
7 31 10.6	7.7	32 36.34	32 21.9	44 12.55	+11.42	-0 1.99	+11.59	-0.85	-13.70		7 32 42.86	52 36 1.3
7 33 4.7	5.0	34 29.32	34 10.6	36 38.70	+15.45	-0 2.03	+ 9.32	-0.83	-13.10		7 34 35.60	50 43 37.2
7 36 53.2	9.1	38 20.50	38 29.3	49 15.95	+ 9.30	-0 2.02	+ 8.60	-0.86	-12.85		7 38 26.72	50 30 52.8
7 37 50.3	7.8	39 17.54	39 9.2	30 48.85	+ 6.55	-0 2.00	+11.71	-0.93	-13.55		7 39 23.95	52 49 19.4

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.			Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.		R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"		s "		h m s	° ' "
7 39 29.4	8.6	40 52.76	40 31.6	26 16.80	+17.45	-0 2.02	+ 9.50	-0.89	-12.90		7 40 58.97	50 54 0.5
7 41 29.2	9.0	42 55.06	42 12.3	5 54.25	+34.22	-0 2.00	+10.57	-0.95	-13.25		7 43 1.36	52 14 40.2
7 41 36.3	9.1	43 2.30	43 3.7	5 54.25	- 1.12	-0 2.00	+11.05	-0.95	-13.25		7 43 8.60	52 14 5.3
7 56 11.3	9.0	57 37.26	57 11.6	59 45.10	+20.49	-0 1.99	+11.22	-1.09	-12.65		7 57 43.34	52 20 34.6
7 57 59.3	9.1	59 23.60	58 56.0	15 39.40	+23.12	-0 2.02	+ 8.38	-1.04	-11.95		7 59 29.46	50 4 40.6
8 0 4.3	8.5	1 28.24	1 0.6	11 31.25	+22.11	-0 1.99	+10.82	-1.12	-12.40		8 1 34.24	52 8 49.3
8 1 51.1	8.0	3 12.62	2 48.5	57 34.05	+20.06	-0 2.02	+ 8.90	-1.08	-11.85		8 3 18.44	50 22 43.0
ZONE 228, MARCH 27, 1873.												
8 2 32.0	8.8	3 50.86	3 24.3	12 8.80	+21.31	+0 1.44	+10.96	-0.81	-14.05		8 4 0.58	52 8 8.4
8 4 7.8	9.0	5 31.02	5 8.1	44 38.10	+18.14	+0 1.44	+11.75	-0.84	-14.10		8 5 40.75	52 35 36.4
8 5 17.2	8.0	6 37.70	6 11.5	37 2.40	+20.72	+0 1.45	+11.63	-0.85	-14.10		8 6 47.43	52 43 14.4
8 7 5.0	9.0	8 24.64	7 59.4	50 46.90	+20.92	+0 1.42	+ 8.98	-0.82	-13.40		8 8 34.13	50 29 27.9
8 8 55.7	8.9	10 16.06	9 49.5	48 31.55	+21.11	+0 1.43	+10.39	-0.86	-13.65		8 10 25.61	51 31 44.3
8 9 32.0	9.0	10 52.66	10 43.5	54 43.00	+ 7.49	+0 1.43	+10.53	-0.86	-13.60		8 11 2.19	51 25 19.4
8 10 33.2	9.2	11 55.34	.....	.....	.....	+0 1.44	.....	-0.88	.....		8 12 4.88	.....
8 11 51.3	9.2	13 10.46	12 49.1	59 25.05	+17.82	+0 1.42	+ 9.19	-0.86	-13.20		8 13 19.86	50 20 46.3
8 12 49.1	8.5	14 8.46	13 39.4	42 21.00	+23.58	+0 1.43	+10.38	-0.90	-13.50		8 14 17.95	51 37 56.9
8 14 18.3	9.1	15 36.58	15 10.1	13 25.65	+22.17	+0 1.42	+ 8.80	-0.88	-13.00		8 15 45.92	50 6 49.6
8 16 44.4	8.4	18 3.28	17 36.2	0 27.80	+22.58	+0 1.42	+ 8.74	-0.91	-13.00		8 18 12.59	50 19 47.4
8 17 50.2	7.0	19 7.48	18 42.1	14 21.85	+21.27	+0 1.42	+ 8.84	-0.91	-12.90		8 19 16.76	50 5 52.1
8 18 56.4	9.8	20 16.50	19 58.3	59 17.80	+14.84	+0 1.43	+10.40	-0.96	-13.25		8 20 25.85	51 20 50.8
8 20 10.0	8.0	21 27.96	21 6.2	37 52.50	+18.02	+0 1.42	+11.64	-0.95	-12.95		8 21 37.24	50 42 20.6
8 22 56.5	9.1	24 16.58	24 6.5	41 37.95	+ 8.36	+0 1.42	+ 9.37	-0.97	-12.85		8 24 25.81	50 38 23.0
8 24 28.9	8.4	25 46.36	25 15.2	26 28.95	+25.68	+0 1.42	+ 9.42	-0.99	-12.85		8 25 55.58	50 53 49.1
8 26 17.4	7.0	27 33.02	27 11.8	31 49.65	+17.86	+0 1.42	+ 8.30	-0.98	-12.45		8 27 42.13	49 48 19.6
8 30 2.8	9.3	31 21.10	30 49.4	3 48.30	+26.44	+0 1.42	+ 8.91	-1.03	-12.45		8 31 30.17	50 16 29.6
8 31 2.2	9.0	32 20.68	31 46.8	50 10.85	+26.94	+0 1.44	+11.08	-1.11	-13.05		8 32 29.89	52 30 9.0
8 33 5.5	8.7	34 23.50	34 3.9	29 38.05	+15.80	+0 1.44	+10.94	-1.10	-12.75		8 34 32.64	51 50 30.5
8 35 57.5	8.4	37 13.80	36 47.8	34 31.85	+21.00	+0 1.44	+10.76	-1.13	-12.60		8 37 22.88	51 45 41.5
8 37 36.7	8.5	38 53.60	38 29.0	36 9.00	+20.32	+0 1.43	+ 9.32	-1.11	-12.25		8 39 2.58	50 44 2.4
8 38 28.8	7.7	39 45.64	39 33.5	26 14.10	+10.18	+0 1.43	+ 8.48	-1.10	-11.95		8 39 54.55	49 53 46.5
8 39 25.4	8.8	40 42.50	40 29.6	25 7.00	+10.84	+0 1.43	+ 8.40	-1.10	-11.90		8 40 51.40	49 54 54.1
8 40 26.6	7.7	41 42.94	41 33.9	31 31.95	+ 7.58	+0 1.42	+ 8.41	-1.11	-11.85		8 41 51.80	49 48 25.8
8 41 43.7	8.6	43 0.79	42 51.6	27 28.00	+ 7.58	+0 1.44	+ 9.71	-1.16	-12.10		8 43 9.70	50 52 30.6
8 43 3.2	9.2	44 20.18	43 54.1	40 52.50	+21.60	+0 1.43	+ 9.16	-1.16	-12.00		8 44 29.05	50 39 19.5
8 44 33.2	8.5	45 49.44	45 23.1	36 28.75	+21.73	+0 1.44	+ 9.31	-1.18	-11.90		8 45 58.29	50 43 43.4
8 45 25.8	9.0	46 41.90	46 16.0	1 26.50	+21.59	+0 1.43	+ 8.83	-1.17	-11.75		8 46 50.71	50 18 45.1
8 47 45.5	8.7	49 7.20	48 38.4	33 33.00	+22.74	+0 1.45	+11.79	-1.28	-12.35		8 49 16.12	52 46 41.8
8 49 3.7	8.2	50 21.44	49 55.9	40 51.00	+20.65	+0 1.45	+10.31	-1.25	-11.95		8 50 30.27	51 39 20.5
8 50 25.6	8.3	51 42.86	51 17.8	55 20.20	+20.43	+0 1.44	+10.00	-1.25	-11.80		8 51 51.65	51 24 50.7
8 51 26.2	8.0	52 42.96	52 15.5	6 33.65	+22.96	+0 1.43	+ 8.72	-1.22	-11.45		8 52 51.65	50 13 38.8
8 53 2.0	9.4	54 19.44	54 4.7	45 0.10	+12.18	+0 1.43	+ 9.14	-1.25	-11.45		8 54 28.12	50 35 1.8
ZONE 229, MARCH 30, 1873.												
8 0 22.0	8.6	1 40.50	1 22.7	56 29.95	+14.18	+0 2.42	+10.93	-0.72	-14.50		8 1 51.34	52 23 39.1
8 2 32.0	9.0	3 49.88	3 27.4	12 4.50	+18.03	+0 2.42	+10.67	-0.73	-14.35		8 4 0.66	52 8 8.0
8 4 7.8	9.2	5 30.06	4 59.2	44 43.50	+24.50	+0 2.42	+11.32	-0.76	-14.45		8 5 40.85	52 35 35.8
8 5 17.2	8.1	6 36.58	6 13.0	35 59.75	+18.66	+0 2.43	+11.19	-0.78	-14.45		8 6 47.36	52 43 13.4
8 7 5.0	9.3	8 23.54	8 0.8	50 43.20	+18.85	+0 2.41	+ 8.71	-0.75	-13.75		8 8 34.09	50 29 28.1

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
8 8 55.7	9.1	10 15.00	9 58.0	48 21.40	+13.80	+0 2.41	+10.17	-0.79	-13.95	8 10 25.60	51 31 45.8
8 9 32.0	9.1	10 51.48	10 39.2	54 45.60	+10.01	+0 2.41	+10.23	-0.79	-13.90	8 11 2.06	51 25 17.8
8 10 33.2	9.5	11 54.34	11 39.3	39 45.45	+12.14	+0 2.42	+10.46	-0.81	-13.95	8 12 4.93	51 40 20.2
8 11 51.3	9.2	13 9.44	12 43.4	59 28.00	+21.65	+0 2.41	+ 8.90	-0.79	-13.50	8 13 19.90	50 20 45.8
8 12 49.1	...	14 7.22	13 44.0	42 14.20	+18.80	+0 2.41	+10.12	-0.83	-13.85	8 14 17.76	51 37 57.5
8 14 18.3	8.8	15 35.54	15 23.4	13 12.05	+10.13	+0 2.40	+ 8.64	-0.80	-13.35	8 15 45.94	50 6 49.8
8 16 44.4	8.5	18 2.04	17 44.5	0 18.05	+14.58	+0 2.41	+ 8.55	-0.84	-13.30	8 18 12.41	50 19 47.8
8 17 50.2	7.7	19 6.40	18 44.2	14 17.50	+18.59	+0 2.40	+ 8.64	-0.84	-13.25	8 19 16.73	50 5 52.4
8 18 56.4	10.0	20 15.36	20 13.8	59 0.90	+ 1.30	+0 2.41	+10.09	-0.88	-13.60	8 20 25.77	51 20 52.6
8 20 10.0	7.9	21 26.80	21 5.1	37 49.85	+17.94	+0 2.41	+ 9.17	-0.88	-13.30	8 21 37.14	50 42 19.6
8 21 51.4	9.4	23 8.86	22 48.6	24 9.15	+16.34	+0 2.42	+10.65	-0.92	-13.60	8 23 19.27	51 55 59.6
8 22 56.5	9.3	24 15.53	23 55.4	41 44.50	+16.64	+0 2.41	+ 9.01	-0.90	-13.20	8 24 25.82	50 38 23.1
8 24 28.9	7.9	25 45.20	25 18.1	26 22.75	+22.31	+0 2.41	+ 9.17	-0.92	-13.20	8 25 55.48	50 53 50.5
8 26 17.4	7.0	27 31.94	27 18.0	31 41.60	+11.74	+0 2.40	+ 8.14	-0.92	-12.80	8 27 42.09	49 48 20.2
8 30 2.8	9.4	31 20.04	30 55.0	3 43.85	+20.85	+0 2.40	+ 8.74	-0.96	-12.80	8 31 30.16	50 16 27.2
8 31 2.2	8.8	32 19.62	31 56.2	49 59.70	+18.59	+0 2.43	+10.85	-1.03	-13.45	8 32 29.90	52 30 10.3
8 33 5.5	9.0	34 22.62	34 6.4	29 32.40	+13.06	+0 2.43	+10.65	-1.03	-13.15	8 34 32.82	51 50 31.9
8 35 57.5	8.4	37 12.72	36 55.8	34 21.35	+13.65	+0 2.43	+10.53	-1.06	-13.00	8 37 22.86	51 45 43.2
8 37 36.7	8.5	38 52.56	38 31.8	36 4.50	+17.18	+0 2.42	+ 9.05	-1.05	-12.65	8 39 2.59	50 44 2.2
8 38 28.8	8.0	39 44.56	39 24.6	26 17.15	+16.82	+0 2.41	+ 8.15	-1.03	-12.35	8 39 54.52	49 53 48.5
8 39 25.4	9.5	40 41.32	40 26.0	25 7.45	+12.86	+0 2.41	+ 8.10	-1.04	-12.30	8 40 51.26	49 54 54.1
8 40 26.6	8.1	41 42.00	41 24.2	31 37.40	+14.99	+0 2.41	+ 7.70	-1.04	-12.25	8 41 51.92	49 48 25.8
8 41 43.7	8.8	42 59.78	42 36.4	27 37.90	+19.27	+0 2.42	+ 9.32	-1.09	-12.50	8 43 9.74	50 52 30.8
8 43 3.2	9.2	44 19.02	43 52.3	40 48.60	+22.10	+0 2.42	+ 8.85	-1.10	-12.40	8 44 28.94	50 39 22.4
8 44 33.2	8.4	45 48.36	45 23.0	36 25.95	+20.98	+0 2.42	+ 9.02	-1.11	-12.30	8 45 58.26	50 43 44.0
8 45 25.8	8.6	46 40.60	46 21.3	1 19.65	+16.09	+0 2.41	+ 8.61	-1.10	-12.15	8 46 50.46	50 18 45.0
8 47 45.5	8.6	49 6.00	48 44.7	33 24.65	+16.80	+0 2.44	+11.52	-1.20	-12.75	8 49 15.99	52 46 42.7
8 49 3.7	8.7	50 20.26	49 58.4	40 46.10	+17.73	+0 2.43	+10.01	-1.18	-12.40	8 50 30.14	51 39 20.9
8 50 25.6	8.6	51 41.58	51 13.9	55 19.45	+22.51	+0 2.42	+ 9.61	-1.18	-12.25	8 51 51.42	51 24 51.9
8 51 26.2	7.8	52 41.96	52 26.9	6 20.95	+12.61	+0 2.42	+ 8.57	-1.15	-11.85	8 52 51.71	50 13 39.7
8 53 2.0	9.2	54 18.36	53 51.3	45 5.45	+22.46	+0 2.42	+ 8.63	-1.18	-11.90	8 54 28.10	50 35 4.9
ZONE 230, APRIL 1, 1873.											
8 42 21.8	8.1	43 36.62	43 19.2	55 24.00	+14.47	+0 3.00	+ 8.75	-1.03	-12.60	8 43 47.18	50 24 39.4
8 42 49.1	9.5	44 3.96	44 10.8	29 1.60	- 5.60	+0 3.01	+ 9.70	-1.05	-12.70	8 44 14.54	50 50 42.4
8 45 18.3	9.0	46 36.88	46 20.8	4 27.75	+12.86	+0 3.03	+11.18	-1.13	-13.00	8 46 47.50	52 15 35.6
8 47 33.1	8.9	48 49.78	48 26.1	25 24.80	+19.08	+0 3.02	+10.33	-1.13	-12.80	8 49 0.34	51 54 43.9
8 48 30.3	9.3	49 45.52	49 31.2	0 20.50	+11.66	+0 3.02	+ 9.79	-1.12	-12.60	8 49 56.03	51 19 40.3
8 49 34.7	9.0	50 49.12	50 39.7	7 15.80	+ 7.85	+0 3.01	+ 8.78	-1.09	-12.20	8 50 59.54	50 12 40.4
8 50 43.1	9.0	51 58.10	51 46.3	56 39.95	+ 9.82	+0 3.05	+ 8.89	-1.11	-12.25	8 52 8.54	50 23 18.2
8 51 26.6	8.5	52 41.94	52 28.6	3 30.25	+11.09	+0 3.01	+ 8.95	-1.11	-12.15	8 52 52.33	50 16 29.2
8 53 2.0	9.1	54 17.80	53 51.0	45 7.00	+22.21	+0 3.01	+ 8.81	-1.14	-12.20	8 54 28.17	50 35 3.2
8 54 36.7	9.0	55 51.88	55 33.7	36 55.45	+15.04	+0 3.02	+ 9.25	-1.15	-12.15	8 56 2.24	50 43 7.8
8 56 25.6	8.6	57 40.36	57 16.3	12 37.35	+19.74	+0 3.02	+ 9.70	-1.18	-12.15	8 57 50.71	51 7 30.8
8 58 47.0	9.0	0 1.72	59 43.9	30 58.15	+14.99	+0 3.01	+ 8.14	-1.17	-11.70	9 0 11.94	49 49 3.9
9 3 11.4	9.2	4 25.10	4 5.1	16 28.05	+16.05	+0 3.03	+10.62	-1.28	-12.10	9 4 35.37	52 3 36.6
9 12 36.4	7.0	13 50.16	13 28.6	15 35.25	+18.09	+0 3.01	+ 8.35	-1.29	-11.10	9 14 0.14	50 4 29.1
9 14 49.7	6.9	16 2.10	15 41.4	31 18.55	+17.07	+0 3.01	+ 9.26	-1.33	-11.15	9 16 12.07	50 48 45.3
.....	9.7	18 11.78	17 57.4	54 29.55	+11.97	+0 3.01	+ 9.22	-1.33	-10.95	9 18 21.70	50 25 29.1
9 25 53.1	9.2	27 4.18	26 35.4	42 28.35	+23.84	+0 3.01	+ 9.07	-1.42	-10.50	9 27 13.93	50 37 41.6
9 26 52.1	9.5	28 3.40	27 49.1	8 54.40	+11.70	+0 3.03	+ 9.99	-1.45	-10.60	9 28 13.17	51 11 4.1
9 28 38.9	8.5	29 50.98	29 35.1	54 19.55	+13.22	+0 3.02	+ 9.19	-1.43	-10.30	9 30 0.69	50 25 39.8
9 32 56.1	7.1	34 8.32	33 42.3	29 57.05	+20.98	+0 3.03	+10.29	-1.53	-10.40	9 34 17.98	51 50 10.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.			Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.		R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"		s "		h m s	° ' "
9 33 36.0	9.5	34 48.20	34 49.3	7 1.05	— 0.90	+0 3.03	+ 9.88	—1.51	—10.20		9 34 57.83	51 12 44.4
9 35 2.7	8.7	36 15.34	35 54.1	43 41.85	+16.80	+0 3.04	+11.43	—1.58	—10.50		9 36 25.00	52 36 22.4
9 40 28.4	9.2	41 39.20	.....	.....	.....	+0 3.03	.....	—1.58	.....		9 41 48.70	.....
9 42 23.1	7.7	43 33.12	43 16.5	7 29.90	+13.87	+0 3.02	+ 8.74	—1.54	— 9.40		9 43 42.54	50 12 29.1
9 44 31.7	8.5	45 42.30	45 22.1	12 55.80	+16.55	+0 3.03	+ 9.76	—1.59	— 9.50		9 45 51.72	51 7 6.6
9 48 35.6	8.8	49 46.76	49 31.9	38 14.55	+11.79	+0 3.04	+11.54	—1.69	— 9.65		9 49 56.14	52 41 44.3
9 49 40.0	8.8	50 50.52	50 36.3	45 16.55	+11.52	+0 3.03	+10.08	—1.65	— 9.43		9 50 59.84	51 34 40.7
9 50 49.3	8.4	51 59.72	51 38.8	29 52.40	+16.86	+0 3.03	+10.74	—1.67	— 9.30		9 52 9.03	51 50 10.9
9 51 27.8	8.0	52 38.36	52 44.0	48 16.75	— 4.45	+0 3.04	+11.42	—1.71	— 9.40		9 52 47.67	52 31 25.8
9 53 51.5	6.0	54 59.08	54 33.6	37 26.70	+21.07	+0 3.02	+ 9.23	—1.64	— 8.85		9 55 8.30	50 42 39.5
9 55 0.5	8.7	56 14.16	55 44.0	9 37.20	+25.24	+0 3.02	+ 8.77	—1.63	— 8.60		9 56 23.34	50 10 32.8
9 56 8.3	8.0	57 17.82	56 59.0	20 15.00	+15.11	+0 3.04	+10.45	—1.72	— 9.00		9 57 27.03	51 59 46.1
9 57 42.7	9.3	58 55.32	58 37.2	16 14.90	+11.54	+0 3.04	+10.64	—1.74	— 8.90		9 59 4.49	52 3 42.8

ZONE 231, APRIL 10, 1873.

8 44 22.1	9.2	45 35.86	45 20.4	57 34.80	+12.90	+0 4.54	+ 8.83	—0.84	—13.50	8 45 48.12	50 22 25.9
8 45 18.3	8.9	46 35.28	46 17.8	4 28.75	+13.98	+0 4.55	+11.13	—0.90	—14.05	8 46 47.65	52 15 34.6
8 47 33.1	8.4	48 48.04	48 31.2	25 18.35	+13.22	+0 4.55	+10.26	—0.91	—13.85	8 49 0.35	51 54 43.3
8 48 30.3	9.0	49 43.80	49 13.6	0 31.95	+24.63	+0 4.54	+ 9.38	—0.90	—13.60	8 49 56.05	51 19 40.3
8 49 34.7	8.8	50 47.24	50 25.2	7 26.45	+18.36	+0 4.54	+ 8.56	—0.89	—13.25	8 50 59.39	50 12 39.0
8 50 43.1	8.8	51 56.46	51 29.7	56 50.95	+22.30	+0 4.54	+ 8.63	—0.90	—13.25	8 52 8.60	50 23 18.4
8 51 26.6	8.5	52 40.20	52 23.3	3 32.40	+14.10	+0 4.54	+ 8.82	—0.91	—13.20	8 52 52.32	50 16 28.8
8 53 2.0	9.1	54 16.10	53 51.3	45 4.60	+20.55	+0 4.54	+ 8.66	—0.93	—13.25	8 54 28.21	50 35 2.7
8 54 36.7	9.0	55 50.08	55 21.5	37 2.50	+23.64	+0 4.54	+ 8.86	—0.95	—13.20	8 56 2.16	50 43 7.9
8 56 25.6	8.3	57 38.62	57 14.7	12 36.15	+19.58	+0 4.53	+ 9.56	—0.98	—13.15	8 57 50.68	51 7 30.7
8 58 47.0	9.2	59 59.96	59 38.4	30 59.85	+18.19	+0 4.53	+ 7.99	—0.97	—12.80	9 0 11.90	49 49 4.1
9 3 11.4	9.0	4 23.38	4 3.3	16 27.90	+16.06	+0 4.54	+10.53	—1.07	—13.25	9 4 35.37	52 3 35.6
9 10 34.8	9.1	11 46.16	11 14.1	28 19.50	+27.00	+0 4.53	+ 8.18	—1.08	—12.30	9 11 57.88	49 51 52.6
9 12 36.4	9.2	13 48.28	13 19.6	15 35.00	+24.04	+0 4.53	+ 8.14	—1.10	—12.25	9 13 59.97	50 4 33.9
9 12 36.4	7.5	13 48.55	13 25.9	15 35.00	+18.93	+0 4.53	+ 8.23	—1.10	—12.25	9 14 0.24	50 4 28.8
9 14 49.7	6.4	16 0.44	15 49.4	31 8.95	+ 9.07	+0 4.52	+ 9.18	—1.14	—12.40	9 16 12.11	50 48 45.6
.....	9.7	18 9.98	17 45.0	54 37.25	+20.79	+0 4.52	+ 9.05	—1.15	—12.15	9 18 21.59	50 25 28.9
9 25 53.1	9.6	27 2.42	26 37.4	42 23.50	+20.70	+0 4.52	+ 9.01	—1.24	—11.80	9 27 13.86	50 37 41.9
9 28 38.9	8.6	29 49.34	29 22.2	54 27.50	+22.53	+0 4.52	+ 8.99	—1.25	—11.60	9 30 0.73	50 25 39.6
9 32 56.1	7.7	34 6.64	33 47.3	29 50.25	+15.93	+0 4.52	+10.27	—1.34	—11.85	9 34 17.98	51 50 10.8
9 33 36.0	9.4	34 46.44	34 29.6	7 16.85	+13.74	+0 4.51	+ 9.71	—1.32	—11.60	9 34 57.74	51 12 41.7
9 35 2.7	8.5	36 13.62	35 45.4	43 46.45	+22.35	+0 4.52	+11.32	—1.39	—11.95	9 36 24.95	52 36 21.8
9 40 28.4	...	41 37.54	41 10.8	48 13.90	+21.68	+0 4.52	+10.11	—1.40	—11.35	9 41 48.71	51 31 52.5
9 42 23.1	7.9	43 31.46	43 8.2	7 33.50	+19.46	+0 4.51	+ 8.62	—1.37	—10.90	9 43 42.54	50 12 29.4
9 44 31.7	8.2	45 40.60	45 12.5	13 0.15	+23.02	+0 4.50	+ 9.58	—1.42	—11.00	9 45 51.66	51 7 7.0
9 45 55.8	9.8	47 5.40	46 42.5	16 41.05	+18.38	+0 4.51	+10.59	—1.47	—11.20	9 47 16.46	52 3 22.1
9 48 35.6	8.8	49 45.04	49 26.1	38 17.45	+14.95	+0 4.51	+11.49	—1.51	—11.20	9 49 56.07	52 41 43.0
9 49 40.0	8.4	50 48.82	50 18.8	45 28.35	+24.33	+0 4.51	+ 9.81	—1.48	—10.93	9 50 59.79	51 34 40.0
9 50 49.3	8.0	51 58.16	51 27.8	30 0.05	+24.53	+0 4.51	+10.02	—1.50	—10.85	9 52 9.12	51 50 8.6
9 51 27.8	8.3	52 36.64	52 37.4	48 18.50	— 0.64	+0 4.51	+11.42	—1.53	—11.00	9 52 47.60	52 31 26.2
9 52 15.4	9.0	53 25.30	53 36.3	36 22.50	— 8.69	+0 4.51	+11.37	—1.55	—11.00	9 53 36.25	52 43 14.0
9 53 51.5	6.0	54 57.48	54 38.7	37 19.10	+15.54	+0 4.50	+ 9.20	—1.48	—10.35	9 55 8.34	50 42 40.0
9 55 0.5	8.9	56 12.48	55 47.0	9 32.30	+21.31	+0 4.50	+ 8.79	—1.47	—10.15	9 56 23.30	50 10 32.2
9 56 8.3	7.0	57 16.20	56 50.7	20 18.35	+20.49	+0 4.51	+10.33	—1.55	—10.55	9 57 27.05	51 59 46.4
9 57 42.7	9.5	58 53.57	58 17.3	16 29.85	+29.13	+0 4.51	+10.35	—1.57	—10.50	9 59 4.38	52 3 43.5

ZONE 232, APRIL 15, 1873.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
9 21 32.4	9.1	22 42.68	22 24.0	32 13.55	+15.43	+0 5.21	+ 9.19	-1.08	-12.80	9 22 55.03	50 47 46.4
9 23 6.7	4.0	24 16.98	23 51.8	5 19.65	+20.14	+0 5.22	+10.65	-1.15	-13.00	9 24 29.36	52 14 46.0
9 24 52.6	5.5	26 2.60	25 38.0	43 44.00	+19.50	+0 5.22	+11.32	-1.17	-13.10	9 26 14.97	52 36 21.4
9 26 17.5	9.3	27 28.74	27 0.5	38 48.55	+22.81	+0 5.22	+10.33	-1.15	-12.80	9 27 41.04	51 41 19.4
9 26 52.1	9.5	28 0.84	28 10.0	8 34.80	- 7.52	+0 5.21	+ 9.87	-1.16	-12.80	9 28 13.08	51 11 2.3

ZONE 233, APRIL 23, 1873.

9 23 6.7	3.0	24 15.22	23 52.6	5 17.25	+18.06	+0 6.83	+10.32	-0.95	-11.80	9 24 29.41	52 14 48.1
9 42 25.5	7.5	43 31.24	43 7.6	59 18.50	+19.66	+0 6.82	+ 8.73	-1.09	-12.60	9 43 44.92	50 20 44.1
9 43 59.0	8.5	45 6.56	44 34.4	45 41.60	+25.54	+0 6.83	+10.59	-1.17	-13.15	9 45 20.30	52 34 28.0
9 46 26.9	7.3	47 33.04	47 3.5	28 30.50	+23.24	+0 6.83	+11.21	-1.20	-13.10	9 47 46.74	52 51 37.2
9 48 44.4	8.0	49 49.14	49 27.3	10 8.65	+17.45	+0 6.83	+10.25	-1.20	-12.80	9 50 2.76	52 9 52.4
9 49 30.9	8.5	50 37.38	50 58.6	51 1.05	-16.85	+0 6.83	+10.58	-1.22	-12.70	9 50 50.99	52 28 26.1
9 52 15.4	9.0	53 22.72	52 58.8	36 49.40	+18.89	+0 6.83	+10.97	-1.25	-12.80	9 53 36.29	52 43 13.5
9 53 27.0	7.8	54 30.92	54 5.8	51 13.15	+20.85	+0 6.82	+ 8.54	-1.19	-12.15	9 54 44.38	50 28 49.8
9 55 0.5	9.0	56 9.84	55 50.2	9 26.20	+16.38	+0 6.82	+ 8.59	-1.20	-11.95	9 56 23.25	50 10 32.4
9 56 8.3	8.0	57 13.70	56 43.1	20 20.00	+24.59	+0 6.83	+ 9.98	-1.26	-12.40	9 57 27.16	51 59 47.7
9 57 47.4	9.1	58 52.72	58 34.3	7 31.35	+14.71	+0 6.83	+10.58	-1.30	-12.35	9 59 6.13	52 12 26.9
9 59 48.4	7.4	0 51.30	0 36.2	54 0.45	+12.29	+0 6.81	+ 9.95	-1.28	-12.15	10 1 4.64	51 25 54.8
10 1 46.6	9.3	2 50.94	2 33.4	19 17.50	+14.68	+0 6.82	+ 8.43	-1.25	-11.60	10 3 4.21	50 0 39.0
10 3 46.7	9.0	4 51.24	4 35.6	24 53.25	+12.84	+0 6.81	+ 9.48	-1.30	-11.75	10 5 4.48	50 55 2.2
10 4 35.9	7.8	5 39.72	5 23.7	25 5.05	+13.17	+0 6.81	+ 9.02	-1.31	-11.70	10 5 52.94	50 54 50.2
10 5 15.5	9.0	6 20.20	6 28.9	52 23.75	- 6.93	+0 6.83	+10.84	-1.36	-12.10	10 6 33.47	52 27 12.8
10 6 42.7	7.9	7 47.62	7 22.7	23 2.90	+20.48	+0 6.81	+ 9.25	-1.33	-11.60	10 8 0.79	50 56 59.9
10 8 47.8	7.8	9 49.62	9 24.7	8 17.25	+20.91	+0 6.82	+ 8.45	-1.32	-11.30	10 10 2.75	50 11 45.2
10 9 45.9	7.0	10 48.60	10 21.9	18 17.25	+21.44	+0 6.83	+10.38	-1.39	-11.75	10 11 1.75	52 1 47.2
10 11 8.4	9.0	12 11.20	11 51.5	26 26.05	+16.56	+0 6.82	+ 7.98	-1.33	-11.10	10 12 24.27	49 53 31.6
10 12 11.0	8.8	13 14.48	12 42.3	19 57.25	+27.27	+0 6.81	+ 9.37	-1.38	-11.35	10 13 27.53	51 0 12.2
10 13 21.9	8.5	14 24.58	14 0.9	12 30.95	+19.41	+0 6.81	+ 9.39	-1.39	-11.30	10 14 37.62	51 7 30.6
10 14 44.0	8.2	15 45.50	15 27.5	6 34.40	+15.03	+0 6.82	+ 9.43	-1.37	-11.00	10 15 58.50	50 13 23.0
10 15 39.6	9.5	16 43.10	16 28.6	31 17.25	+11.70	+0 6.82	+10.09	-1.44	-11.40	10 16 56.10	51 48 37.0
10 17 24.5	8.9	18 27.44	18 6.6	38 53.20	+16.83	+0 6.81	+10.16	-1.45	-11.30	10 18 40.39	51 41 6.2
10 21 0.3	7.8	22 3.40	21 32.4	26 18.00	+24.41	+0 6.83	+11.03	-1.53	-11.40	10 22 16.31	52 53 49.5
10 21 38.5	8.7	22 41.28	22 26.4	17 26.10	+11.96	+0 6.83	+10.44	-1.50	-11.15	10 22 54.16	52 2 28.6
10 23 35.0	8.5	24 37.32	24 11.4	50 45.55	+20.58	+0 6.83	+10.63	-1.53	-11.15	10 24 50.17	52 29 17.8
10 25 15.0	9.2	26 16.90	25 50.1	32 2.85	+22.11	+0 6.82	+ 8.85	-1.47	-10.65	10 26 29.70	50 48 0.6
10 27 0.3	9.0	28 3.80	27 44.7	22 33.60	+15.02	+0 6.83	+11.40	-1.59	-11.10	10 28 16.52	51 57 24.8
10 27 59.3	9.0	29 2.60	28 46.5	59 9.85	+13.13	+0 6.81	+ 9.89	-1.44	-10.60	10 29 15.40	51 20 45.6
10 29 46.4	9.6	30 49.14	30 22.7	10 55.55	+21.14	+0 6.83	+10.29	-1.57	-10.75	10 31 1.85	52 9 8.0

ZONE 234, APRIL 26, 1873.

9 42 25.5	7.5	43 31.02	43 10.3	59 14.90	+17.24	+0 7.07	+ 8.69	-1.02	-12.90	9 43 45.02	50 20 44.7
9 43 59.0	8.5	45 6.28	44 44.1	45 32.45	+17.61	+0 7.08	+10.70	-1.10	-13.45	9 45 20.34	52 34 28.8
9 46 26.9	7.0	47 32.76	47 16.8	28 18.95	+12.61	+0 7.08	+11.33	-1.13	-13.45	9 47 46.78	52 51 37.7
9 48 44.4	7.0	49 48.86	49 26.6	10 7.95	+17.85	+0 7.07	+10.23	-1.13	-13.15	9 50 2.79	52 9 53.0
9 52 15.4	8.8	53 22.42	53 1.0	36 46.35	+16.91	+0 7.08	+10.99	-1.18	-13.15	9 53 36.31	52 43 14.1
9 53 27.0	7.1	54 30.60	54 8.8	51 10.80	+18.11	+0 7.06	+ 8.52	-1.12	-12.50	9 54 44.37	50 28 48.9

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
9 55 0.5	8.9	56 9.56	55 44.4	9 30.15	+21.06	+0 7.06	+ 8.47	-1.13	-12.30	9 56 23.28	50 10 32.5
9 56 8.3	8.0	57 13.30	56 55.6	20 10.20	+14.22	+0 7.07	+10.11	-1.20	-12.75	9 57 27.06	51 59 46.7
9 57 47.4	9.2	58 52.34	58 32.0	7 32.90	+16.23	+0 7.07	+10.54	-1.22	-12.75	9 59 6.07	52 12 26.3
10 8 47.8	7.0	9 49.38	9 23.1	8 17.60	+21.97	+0 7.05	+ 8.38	-1.26	-11.70	10 10 2.80	50 11 45.3
10 9 45.9	7.0	10 48.32	10 30.3	18 9.90	+14.45	+0 7.06	+10.46	-1.32	-12.15	10 11 1.77	52 1 47.0
ZONE 235, APRIL 27, 1873.											
9 42 25.5	7.9	43 30.90	43 5.8	59 19.05	+20.91	+0 7.13	+ 8.61	-1.00	-13.00	9 43 44.98	50 20 44.4
9 43 59.0	9.0	45 6.24	44 48.6	45 30.40	+13.96	+0 7.14	+10.70	-1.07	-13.55	9 45 20.39	52 34 27.4
9 46 26.9	6.9	47 32.70	47 12.3	28 23.15	+16.07	+0 7.14	+11.26	-1.11	-13.55	9 47 46.80	52 51 37.1
9 48 44.4	7.8	49 48.78	49 29.9	10 5.95	+15.13	+0 7.14	+10.22	-1.11	-13.25	9 50 2.80	52 9 52.4
9 52 15.4	9.1	53 22.34	53 9.7	36 40.55	+ 9.96	+0 7.14	+11.02	-1.16	-13.25	9 53 36.31	52 43 13.1
9 53 27.0	7.3	54 30.54	54 11.6	51 8.00	+15.70	+0 7.13	+ 8.51	-1.10	-12.60	9 54 44.40	50 28 49.5
9 55 0.5	9.0	56 9.50	55 50.2	9 26.00	+16.13	+0 7.12	+ 8.51	-1.11	-12.40	9 56 23.30	50 10 32.0
9 56 8.3	7.7	57 13.26	56 53.9	20 11.85	+15.59	+0 7.13	+10.06	-1.17	-12.90	9 57 27.11	51 59 46.5
9 57 47.4	9.4	58 52.44	58 26.9	7 37.60	+20.39	+0 7.13	+10.46	-1.20	-12.85	9 59 6.25	52 12 25.8
9 59 48.4	7.9	0 50.96	0 30.3	54 5.00	+16.84	+0 7.12	+ 9.82	-1.19	-12.55	10 1 4.70	51 25 54.4
10 1 46.6	9.6	2 50.70	2 18.7	19 29.15	+26.84	+0 7.12	+ 8.20	-1.17	-12.05	10 3 4.35	50 0 39.0
10 3 46.7	9.0	4 50.94	4 35.7	24 53.05	+12.51	+0 7.12	+ 9.41	-1.21	-12.25	10 5 4.58	50 55 1.6
10 4 35.9	8.0	5 39.20	5 18.4	25 9.45	+17.12	+0 7.12	+ 8.87	-1.22	-12.20	10 5 52.82	50 54 49.2
10 5 15.5	9.2	6 19.82	6 29.5	52 23.50	- 7.72	+0 7.13	+10.78	-1.27	-12.60	10 6 33.48	52 27 11.8
10 6 42.7	7.4	7 47.22	7 24.2	23 1.90	+18.92	+0 7.12	+ 9.19	-1.24	-12.15	10 8 0.79	50 56 58.8
10 8 47.8	7.2	9 49.28	9 25.8	8 15.45	+19.64	+0 7.12	+ 8.38	-1.24	-11.80	10 10 2.79	50 11 45.3
10 9 45.9	6.0	10 48.30	10 21.8	18 17.10	+21.28	+0 7.13	+10.33	-1.30	-12.30	10 11 1.84	52 1 46.7
10 11 8.4	9.0	12 10.98	11 43.9	26 32.05	+22.79	+0 7.12	+ 7.81	-1.25	-11.60	10 12 24.43	49 53 31.3
10 12 11.0	8.9	13 14.12	12 46.2	19 54.05	+22.92	+0 7.12	+ 9.31	-1.29	-11.85	10 13 27.57	51 0 10.6
10 13 21.9	8.4	14 24.34	14 16.6	12 17.30	+ 6.31	+0 7.12	+ 9.41	-1.30	-11.85	10 14 37.78	51 7 30.7
10 14 44.0	8.3	15 45.16	15 23.2	6 36.70	+18.37	+0 7.12	+ 9.24	-1.28	-11.50	10 15 58.55	50 13 23.5
10 15 39.6	9.4	16 42.80	16 32.1	31 13.85	+ 8.63	+0 7.13	+10.02	-1.35	-11.90	10 16 56.20	51 48 36.9
10 17 24.5	9.1	18 27.16	17 54.5	39 3.20	+26.46	+0 7.12	+ 9.81	-1.36	-11.80	10 18 40.51	51 41 5.1
10 21 0.3	7.0	22 3.02	21 38.3	26 13.05	+19.45	+0 7.13	+11.04	-1.44	-11.95	10 22 16.32	52 53 49.1
10 21 38.5	8.8	22 40.98	22 30.4	17 22.45	+ 8.51	+0 7.13	+10.40	-1.41	-11.70	10 22 54.25	52 2 28.3
10 23 35.0	8.8	24 36.96	24 11.7	50 45.05	+20.10	+0 7.13	+10.55	-1.44	-11.75	10 24 50.20	52 29 17.3
10 25 15.0	9.4	26 16.54	25 45.9	32 6.10	+25.24	+0 7.11	+ 8.80	-1.39	-11.20	10 26 29.71	50 48 0.0
10 27 0.3	9.0	28 3.38	27 44.2	22 33.95	+15.09	+0 7.12	+11.39	-1.49	-11.70	10 28 16.49	51 57 24.0
10 27 59.3	9.1	29 2.28	28 38.5	59 15.70	+19.40	+0 7.11	+ 9.75	-1.44	-11.20	10 29 15.38	51 20 45.4
10 29 46.4	9.5	30 48.68	30 17.8	10 58.15	+24.75	+0 7.12	+10.19	-1.56	-11.30	10 31 1.69	52 9 8.5
ZONE 236, MAY 4, 1873.											
10 39 16.6	9.6	40 16.40	40 28.4	44 8.60	- 9.95	+0 7.72	+ 8.94	-1.36	-11.30	10 40 30.01	50 35 21.5
10 41 59.2	8.0	42 58.10	42 36.1	52 21.25	+17.50	+0 7.72	+10.72	-1.45	-11.70	10 43 11.66	52 27 37.5
10 42 56.0	9.1	43 59.64	43 31.4	34 59.65	+22.29	+0 7.72	+10.81	-1.46	-11.70	10 44 13.19	52 45 3.9
10 44 57.8	7.8	45 54.66	45 34.2	26 14.55	+17.24	+0 7.72	+ 7.88	-1.38	-10.85	10 46 8.16	49 53 40.8
10 47 30.6	9.3	48 29.12	48 13.3	1 39.40	+13.17	+0 7.72	+ 8.41	-1.40	-10.95	10 48 42.57	50 18 13.2
10 50 29.8	9.0	51 29.08	51 1.9	16 4.40	+22.78	+0 7.72	+ 7.88	-1.44	-10.60	10 51 42.44	50 3 57.4
10 53 13.9	8.8	54 10.62	53 56.7	3 2.20	+11.59	+0 7.72	+ 8.53	-1.47	-10.50	10 54 23.92	50 16 49.1
10 57 56.8	9.1	58 53.92	58 36.0	33 30.40	+14.77	+0 7.71	+ 9.08	-1.53	-10.30	10 59 7.10	50 46 24.6
10 59 15.6	8.2	0 11.54	59 50.8	28 48.95	+17.42	+0 7.71	+ 8.06	-1.51	-10.05	11 0 24.70	49 51 7.8
11 4 18.8	9.3	5 14.42	5 6.5	38 30.40	+ 6.53	+0 7.71	+ 9.05	-1.58	-10.00	11 5 27.46	50 41 16.3
11 5 33.8	7.0	6 28.26	6 4.0	47 50.80	+20.16	+0 7.71	+ 8.70	-1.58	- 9.90	11 6 41.28	50 32 9.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
11 13 49.9	8.9	14 43.42	14 27.5	57 31.75	+12.95	+0 7.70	+ 9.67	-1.68	- 9.65	11 14 56.24	51 22 22.0
11 15 27.1	8.4	16 21.96	16 2.7	9 34.35	+15.45	+0 7.71	+10.68	-1.72	- 9.75	11 16 34.74	52 10 22.8
11 16 22.3	9.4	17 18.00	16 49.9	39 7.25	+22.24	+0 7.71	+11.07	-1.75	- 9.85	11 17 30.75	52 40 57.9
11 17 13.7	7.7	18 8.36	17 52.2	16 6.45	+13.53	+0 7.71	+ 8.03	-1.65	- 9.10	11 18 21.14	50 3 46.8
11 20 45.3	9.6	21 40.22	21 12.9	8 40.95	+21.84	+0 7.70	+10.51	-1.77	- 9.45	11 21 52.87	52 11 22.5
11 24 55.5	7.9	25 47.58	25 25.1	8 46.85	+18.55	+0 7.70	+ 8.43	-1.71	- 8.70	11 26 0.19	50 11 11.9
11 26 46.8	8.0	27 40.26	27 22.1	40 26.25	+14.41	+0 7.70	+10.82	-1.83	- 9.20	11 27 52.76	52 39 30.2
11 30 13.8	8.9	31 7.98	30 43.7	0 51.50	+20.25	+0 7.70	+ 8.27	-1.76	- 8.40	11 31 20.47	50 19 8.9
ZONE 237, MAY 12, 1873.											
11 5 33.8	7.8	6 26.82	6 4.3	47 48.95	+18.66	+0 8.96	+ 8.49	-1.42	-10.95	11 6 41.25	50 32 8.6
11 7 43.4	8.8	8 37.54	8 9.2	0 45.30	+23.08	+0 8.96	+ 9.04	-1.46	-11.05	11 8 51.92	51 19 17.0
11 20 45.3	9.6	21 38.82	21 20.0	8 32.00	+15.04	+0 8.96	+10.34	-1.60	-10.65	11 21 52.90	52 11 23.6
11 26 46.8	7.5	27 38.85	27 53.5	40 0.50	-11.64	+0 8.95	+10.56	-1.67	-10.20	11 27 52.76	52 39 28.9
11 29 4.0	9.5	29 56.78	29 42.0	45 39.80	+12.27	+0 8.96	+ 8.44	-1.61	- 9.75	11 30 10.70	50 34 11.8
11 30 13.8	8.0	31 6.46	30 53.3	0 40.60	+11.00	+0 8.96	+ 8.19	-1.61	- 9.60	11 31 20.36	50 19 9.6
11 33 41.9	8.5	34 33.52	34 11.5	39 28.45	+17.41	+0 8.95	+10.94	-1.73	-10.05	11 34 47.27	52 40 30.4
11 35 13.4	...	36 5.22	35 46.8	42 45.40	+14.58	+0 8.95	+10.76	-1.74	- 9.95	11 36 18.94	52 37 10.5
11 36 56.0	9.2	37 47.50	37 24.7	41 51.50	+18.87	+0 8.96	+ 8.54	-1.67	- 9.35	11 38 1.25	50 38 7.0
11 38 56.0	9.2	39 47.14	39 19.3	28 44.75	+22.41	+0 8.96	+ 9.94	-1.74	- 9.55	11 40 0.80	51 51 18.5
11 40 10.3	6.8	40 58.98	40 38.2	48 55.05	+17.26	+0 8.96	+ 8.62	-1.69	- 9.15	11 41 12.66	50 31 2.1
11 42 24.1	9.0	43 13.04	42 43.6	15 5.00	+24.63	+0 8.96	+ 7.80	-1.69	- 8.90	11 43 26.69	50 4 58.9
11 44 38.1	7.0	45 27.48	45 18.5	42 14.65	+ 7.45	+0 8.96	+ 8.68	-1.73	- 8.90	11 45 41.06	50 37 32.9
ZONE 238, MAY 13, 1873.											
11 33 41.9	8.5	34 33.60	34 9.2	39 31.10	+19.31	+0 8.88	+10.88	-1.71	-10.20	11 34 47.30	52 40 29.1
11 35 13.4	8.6	36 5.40	35 37.9	42 53.05	+21.79	+0 8.88	+10.64	-1.72	-10.10	11 36 19.07	52 37 9.4
11 36 4.4	8.5	36 54.78	36 44.9	40 33.25	+ 7.84	+0 8.88	+10.64	-1.73	-10.05	11 37 8.42	52 39 15.3
11 36 56.0	9.1	37 47.78	37 42.2	41 36.60	+ 4.64	+0 8.89	+ 8.61	-1.65	- 9.50	11 38 1.48	50 38 7.3
11 38 56.0	9.4	39 47.42	39 34.8	28 33.20	+10.16	+0 8.88	+10.04	-1.72	- 9.70	11 40 1.02	51 51 17.4
11 40 10.3	6.5	40 59.02	40 35.5	48 58.55	+19.50	+0 8.89	+ 8.57	-1.67	- 9.30	11 41 12.65	50 31 0.3
11 42 24.1	9.0	43 13.14	42 49.2	15 0.95	+20.03	+0 8.89	+ 7.85	-1.67	- 9.05	11 43 26.74	50 4 57.9
11 44 1.5	9.6	44 51.82	44 38.1	35 39.85	+11.32	+0 8.89	+ 8.60	-1.71	- 9.10	11 45 5.36	50 44 11.0
11 51 37.5	9.4	52 26.84	51 59.1	55 21.30	+23.04	+0 8.89	+ 8.10	-1.75	- 8.60	11 52 40.23	50 24 41.2
11 55 44.1	9.3	56 33.28	56 11.3	14 34.50	+18.42	+0 8.89	+ 8.22	-1.77	- 8.25	11 56 46.59	50 5 23.9
11 58 21.3	8.0	59 8.40	58 49.6	57 16.10	+15.65	+0 8.89	+ 8.33	-1.80	- 8.20	11 59 21.64	50 22 39.6
11 59 30.0	8.7	0 19.44	59 55.0	54 10.45	+19.42	+0 8.88	+10.61	-1.89	- 8.60	12 0 32.57	52 25 50.9
12 1 32.6	9.0	2 20.54	1 55.4	13 3.45	+20.56	+0 8.89	+ 9.00	-1.85	- 8.15	12 2 33.69	51 6 57.9
12 2 39.5	9.0	3 28.62	3 7.5	52 8.75	+17.53	+0 8.89	+ 8.40	-1.84	- 7.95	12 3 41.76	50 27 49.2
12 4 24.8	8.3	5 12.12	4 50.1	48 2.90	+17.86	+0 8.88	+ 9.61	-1.89	- 8.10	12 5 25.18	51 31 56.4
12 4 24.8	9.5	5 12.62	5 2.4	48 2.90	+ 8.28	+0 8.88	+ 9.71	-1.89	- 8.10	12 5 25.68	51 31 47.0
12 5 14.4	8.8	6 1.94	5 43.0	30 7.00	+15.58	+0 8.88	+ 8.62	-1.87	- 7.90	12 6 15.02	50 49 49.3
12 7 19.0	8.4	8 6.18	7 41.5	39 27.20	+19.54	+0 8.88	+10.91	-1.96	- 8.20	12 8 19.12	52 40 35.0
12 15 2.3	8.8	15 51.50	15 30.1	9 38.35	+17.89	+0 8.89	+ 8.33	-1.91	- 7.10	12 16 4.40	50 10 20.8
12 16 20.8	9.2	17 7.78	16 46.4	29 5.50	+16.86	+0 8.87	+11.04	-2.04	- 7.65	12 17 20.49	52 50 54.8
12 17 0.2	4.0	17 43.96	17 27.7	4 38.35	+13.02	+0 8.87	+10.59	-2.01	- 7.55	12 17 56.69	52 15 17.8
12 18 34.8	8.8	19 20.16	18 58.2	45 9.60	+18.23	+0 8.88	+ 8.19	-1.95	- 6.95	12 19 32.96	50 34 50.0
12 19 21.1	9.2	20 6.70	19 49.8	9 8.00	+14.12	+0 8.88	+ 8.34	-1.93	- 6.80	12 20 19.51	50 10 47.8
12 20 11.1	9.1	20 56.86	20 34.5	46 44.95	+18.57	+0 8.88	+ 8.47	-1.96	- 6.85	12 21 9.63	50 33 15.4
12 21 42.0	7.8	22 25.34	22 6.4	0 21.05	+15.75	+0 8.88	+ 8.13	-1.95	- 6.70	12 22 38.10	50 19 36.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	" "	m s	" "	s "	" "	h m s	° ' "
12 22 54.9	8.4	23 40.30	23 15.8	3 16.15	+19.56	+0 8.87	+10.39	-2.05	- 7.10	12 23 52.91	52 16 46.9
12 23 36.4	8.8	24 22.64	24 15.3	23 51.10	+ 5.87	+0 8.87	+10.26	-2.04	- 7.00	12 24 35.25	51 55 58.2
12 24 40.7	9.8	25 26.32	25 16.6	3 49.40	+ 8.09	+0 8.88	+ 8.46	-1.97	- 6.50	12 25 39.02	50 16 0.9
12 26 38.3	8.4	27 23.46	27 0.6	24 8.60	+18.43	+0 8.87	+10.13	-2.06	- 6.75	12 27 36.01	51 55 53.5
12 26 49.5	8.7	27 35.00	27 3.2	24 8.60	+25.60	+0 8.87	+10.01	-2.06	- 6.75	12 27 47.54	51 56 0.5
12 28 24.5	8.3	29 8.12	28 42.1	30 9.30	+21.43	+0 8.88	+ 8.56	-2.02	- 6.40	12 29 20.71	50 49 54.6
12 29 18.3	9.1	30 4.78	29 41.7	17 0.10	+19.36	+0 8.88	+ 7.96	-1.99	- 6.15	12 30 17.39	50 3 1.4
12 30 24.0	8.7	31 8.30	30 51.3	33 55.60	+14.03	+0 8.88	+ 8.94	-2.03	- 6.25	12 31 20.85	50 46 1.4
12 32 0.1	9.6	32 44.74	32 21.8	2 41.10	+19.09	+0 8.88	+ 8.27	-2.01	- 6.00	12 32 57.29	50 17 20.6
ZONE 239, MAY 15, 1873.											
11 33 41.9	8.3	34 29.74	34 4.8	40 48.80	+19.70	+0 12.65	+10.53	-1.67	-10.50	11 34 47.25	52 40 30.4
11 35 13.4	8.9	36 1.48	35 37.7	44 7.85	+18.86	+0 12.65	+10.89	-1.68	-10.40	11 36 18.96	52 37 10.9
11 36 4.4	9.0	36 51.00	36 33.9	41 57.20	+13.54	+0 12.65	+10.79	-1.69	-10.35	11 37 8.45	52 39 16.2
11 36 56.0	9.0	37 43.84	37 25.6	43 6.70	+15.07	+0 12.66	+ 8.77	-1.61	- 9.75	11 38 1.35	50 38 6.8
11 38 56.0	9.2	39 43.48	39 19.4	30 0.20	+19.43	+0 12.65	+ 9.71	-1.68	-10.00	11 40 0.89	51 51 18.3
11 40 10.3	6.9	40 55.18	40 34.8	50 14.40	+16.93	+0 12.66	+ 8.35	-1.64	- 9.60	11 41 12.61	50 31 0.6
11 42 24.1	9.0	43 9.38	42 44.3	16 20.40	+21.02	+0 12.66	+ 7.93	-1.64	- 9.35	11 43 26.78	50 4 58.5
11 44 1.5	9.7	44 48.00	44 33.9	36 57.90	+11.65	+0 12.66	+ 8.80	-1.67	- 9.40	11 45 5.35	50 44 12.4
11 44 38.1	7.8	45 23.88	45 37.0	43 14.85	-10.84	+0 12.66	+ 8.78	-1.67	- 9.35	11 45 41.22	50 37 33.0
11 51 37.5	9.7	52 23.08	52 2.2	56 34.15	+17.38	+0 12.66	+ 8.36	-1.72	- 8.90	11 52 40.27	50 24 41.9
11 55 44.1	9.1	56 29.36	56 2.9	15 55.60	+22.19	+0 12.66	+ 7.89	-1.73	- 8.60	11 56 46.48	50 5 25.1
11 58 21.3	8.4	59 4.58	58 36.0	58 42.10	+23.80	+0 12.66	+ 8.42	-1.77	- 8.50	11 59 21.62	50 22 40.8
11 59 30.0	8.8	0 15.54	59 59.0	55 20.95	+13.13	+0 12.65	+10.44	-1.86	- 8.95	12 0 32.47	52 25 52.9
12 1 32.6	8.7	2 16.80	2 0.6	14 14.20	+13.27	+0 12.67	+ 9.39	-1.81	- 8.50	12 2 33.77	51 6 59.2
12 2 39.5	9.2	3 24.80	3 13.0	53 20.30	+ 9.80	+0 12.66	+ 8.67	-1.80	- 8.30	12 3 41.75	50 27 49.1
12 4 24.8	9.6	5 8.34	4 42.9	49 24.50	+20.63	+0 12.67	+ 9.77	-1.85	- 8.45	12 5 25.23	51 31 56.6
12 4 24.8	8.3	5 8.84	4 52.5	49 24.50	+13.24	+0 12.67	+ 9.87	-1.85	- 8.45	12 5 25.73	51 31 49.4
12 5 14.4	8.7	5 58.26	5 41.6	31 23.45	+13.77	+0 12.67	+ 8.84	-1.83	- 8.20	12 6 15.16	50 49 50.2
ZONE 240, MAY 25, 1873.											
12 7 19.0	8.5	7 51.94	7 30.4	40 41.45	+17.01	+0 22.93	+10.51	-1.72	-10.05	12 8 19.17	52 40 35.5
12 11 17.3	9.8	11 50.80	11 28.2	2 17.15	+18.44	+0 22.94	+ 9.21	-1.70	- 9.50	12 12 18.01	51 19 0.5
12 15 2.3	9.2	15 37.12	15 8.3	11 1.90	+24.07	+0 22.96	+ 7.83	-1.69	- 9.00	12 16 4.31	50 10 20.6
12 16 20.8	9.2	16 53.50	16 30.8	30 22.85	+17.89	+0 22.93	+10.63	-1.80	- 9.60	12 17 20.51	52 50 55.6
12 17 0.2	6.0	17 29.68	17 38.1	5 34.15	- 6.71	+0 22.94	+10.17	-1.78	- 9.45	12 17 56.71	52 15 19.5
12 18 34.8	8.7	19 5.86	18 54.2	46 18.35	+ 9.70	+0 22.96	+ 8.45	-1.73	- 8.95	12 19 32.96	50 34 50.5
12 19 21.1	9.4	19 52.52	19 46.0	10 18.25	+ 5.43	+0 22.97	+ 7.96	-1.72	- 8.80	12 20 19.63	50 10 46.0
12 20 11.1	8.9	20 42.62	21 0.3	47 28.40	-14.67	+0 22.96	+ 8.52	-1.74	- 8.85	12 21 9.69	50 33 16.3
12 21 42.0	8.2	22 11.06	21 47.6	1 43.00	+19.58	+0 22.96	+ 8.15	-1.74	- 8.70	12 22 38.11	50 19 35.7
12 22 54.9	8.5	23 25.82	23 0.4	4 34.00	+20.29	+0 22.94	+10.50	-1.83	- 9.10	12 23 52.72	52 16 47.4
12 23 36.4	9.1	24 8.32	23 57.8	25 10.65	+ 8.45	+0 22.94	+ 9.80	-1.82	- 9.00	12 24 35.22	51 55 58.3
12 26 38.3	8.7	27 9.18	26 38.4	25 31.45	+24.79	+0 22.94	+ 9.62	-1.84	- 8.80	12 27 36.02	51 55 53.9
12 26 49.5	9.1	27 20.86	26 44.4	25 31.45	+29.38	+0 22.94	+ 9.52	-1.84	- 8.80	12 27 47.69	51 55 58.4
12 28 24.5	8.8	28 53.78	28 26.8	31 25.15	+22.26	+0 22.97	+ 8.59	-1.81	- 8.45	12 29 20.67	50 49 57.1
12 29 18.3	9.4	29 50.48	29 35.8	18 11.20	+12.32	+0 22.98	+ 8.11	-1.80	- 8.25	12 30 17.38	50 3 0.8
12 30 24.0	9.1	30 54.00	30 36.8	35 15.50	+14.20	+0 22.97	+ 8.48	-1.82	- 8.35	12 31 20.85	50 45 58.7
12 32 0.1	9.7	32 30.46	32 12.9	3 54.90	+14.68	+0 22.98	+ 8.41	-1.81	- 8.10	12 32 57.31	50 17 20.0

ZONE 241, JUNE 11, 1873.

R. A. 1855.0. According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	[°] ['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
13 46 21.3	8.2	46 49.78	46 28.4	35 29.00	+17.29	+0 17.16	+ 9.50	-2.03	- 7.05	13 47 9.52	51 45 57.3
13 52 59.4	9.0	53 25.16	53 8.9	22 55.20	+13.10	+0 17.15	+10.06	-2.08	- 6.75	13 53 44.75	51 58 28.3
13 55 48.7	7.9	56 13.58	55 54.4	36 49.10	+15.86	+0 17.18	+ 8.56	-2.05	- 6.35	13 56 33.26	50 44 36.3
13 57 37.5	6.0	58 1.00	57 52.9	46 52.20	+ 6.57	+0 17.16	+ 9.55	-2.09	- 6.40	13 58 20.55	51 34 25.0
14 3 51.0	9.2	4 15.94	3 56.1	18 59.55	+16.60	+0 17.19	+ 8.03	-2.07	- 5.75	14 4 35.55	50 2 27.3
14 5 20.8	9.0	5 47.82	5 23.1	43 33.40	+19.57	+0 17.15	+10.70	-2.17	- 6.15	14 6 7.12	52 37 58.9
14 12 59.9	9.0	13 23.72	13 3.2	11 18.35	+17.14	+0 17.18	+ 7.89	-2.12	- 5.30	14 13 43.16	50 10 10.2
14 15 25.6	8.6	15 50.96	15 31.8	56 46.95	+15.97	+0 17.18	+ 8.21	-2.14	- 5.20	14 16 10.33	50 24 41.1
14 19 7.2	8.7	19 29.46	19 13.4	32 8.75	+13.27	+0 17.17	+ 8.70	-2.17	- 5.05	14 19 48.72	50 49 17.6
14 22 39.5	9.7	23 2.38	22 36.8	43 50.70	+20.28	+0 17.15	+10.72	-2.26	- 5.20	14 23 21.36	52 37 44.9
14 24 25.3	8.5	24 49.86	24 34.6	35 21.10	+18.91	+0 17.18	+ 8.42	-2.10	- 4.75	14 25 9.15	50 46 11.5
14 28 41.8	8.9	29 4.28	28 42.0	52 42.35	+18.13	+0 17.16	+ 9.44	-2.24	- 4.65	14 29 23.31	51 28 51.0
14 30 11.4	8.7	30 34.48	30 15.6	49 29.00	+15.35	+0 17.16	+ 9.70	-2.25	- 4.55	14 30 53.47	51 32 2.0
14 30 58.4	8.9	31 21.60	31 11.4	55 13.90	+ 8.30	+0 17.16	+ 9.23	-2.25	- 4.50	14 31 40.59	51 26 9.8
14 33 12.4	6.9	33 32.32	33 10.2	14 25.40	+17.71	+0 17.15	+10.33	-2.29	- 4.50	14 33 51.19	52 7 9.1
14 41 4.1	9.2	41 25.80	41 7.8	31 23.40	+14.84	+0 17.17	+ 8.65	-2.27	- 3.80	14 41 44.72	50 50 8.1
14 42 53.6	8.0	43 15.06	42 56.5	16 32.45	+15.58	+0 17.18	+ 7.88	-2.25	- 3.55	14 43 34.04	50 4 59.5
14 44 27.5	7.9	44 47.74	44 26.9	0 13.65	+17.32	+0 17.18	+ 7.99	-2.27	- 3.50	14 45 6.66	50 21 20.3
14 59 58.2	9.2	0 18.36	0 53.1	20 29.00	+21.22	+0 17.19	+ 7.74	-2.31	- 2.55	15 0 37.12	50 1 11.5
15 1 6.9	8.7	1 26.80	1 7.5	23 34.40	+16.20	+0 17.19	+ 7.96	-2.30	- 2.50	15 1 45.57	49 58 1.4
15 3 7.8	8.5	3 28.90	3 1.0	37 44.40	+22.05	+0 17.16	+10.73	-2.43	- 2.75	15 3 47.25	52 44 0.1
15 3 44.7	6.0	4 2.84	3 53.4	49 26.60	+ 7.80	+0 17.19	+ 8.72	-2.34	- 2.40	15 4 21.41	50 32 22.0
15 5 21.3	9.2	5 40.54	5 18.2	37 7.90	+18.41	+0 17.19	+ 8.57	-2.36	- 2.25	15 5 59.14	50 44 31.6
15 20 32.8	8.4	20 50.08	20 43.8	42 27.15	+ 5.10	+0 17.17	+ 9.75	-2.44	- 1.55	15 21 8.35	51 39 2.9
15 21 45.3	9.0	22 2.60	21 47.7	33 27.40	+12.03	+0 17.17	+ 9.97	-2.45	- 1.50	15 22 20.84	51 48 10.0

ZONE 242, JUNE 17, 1873.

13 46 21.3	8.2	46 52.60	46 35.5	35 24.30	+13.81	+0 14.32	+ 9.50	-1.92	- 7.95	13 47 9.61	51 45 57.9
13 52 59.4	9.0	53 27.90	53 1.8	23 0.95	+20.98	+0 14.32	+ 9.88	-1.96	- 7.70	13 53 44.78	51 58 29.6
13 55 48.7	8.2	56 16.32	56 8.9	36 39.15	+ 6.11	+0 14.34	+ 8.56	-1.94	- 7.30	13 56 33.27	50 44 35.9
13 57 37.5	6.0	58 3.82	57 42.4	47 2.10	+17.36	+0 14.32	+ 9.47	-1.98	- 7.35	13 58 20.64	51 34 25.2
14 3 51.0	9.5	4 18.66	4 6.5	18 51.85	+10.23	+0 14.35	+ 7.99	-1.96	- 6.75	14 4 35.54	50 2 28.0
14 5 20.8	9.2	5 50.52	5 23.1	43 34.40	+21.71	+0 14.31	+10.58	-2.06	- 7.20	14 6 7.09	52 37 59.1
14 12 59.9	9.2	13 26.38	13 1.4	11 21.50	+20.90	+0 14.34	+ 7.80	-2.02	- 6.35	14 13 43.08	50 10 10.0
14 15 25.6	8.9	15 53.76	15 33.5	56 47.05	+16.88	+0 14.33	+ 8.13	-2.04	- 6.25	14 16 10.38	50 24 41.1
14 19 7.2	8.7	19 32.26	19 5.2	32 17.15	+22.35	+0 14.33	+ 8.52	-2.07	- 6.15	14 19 48.78	50 49 17.4
14 22 39.5	9.6	23 5.30	22 39.0	43 50.90	+20.84	+0 14.30	+10.62	-2.15	- 6.30	14 23 21.54	52 37 44.4
14 24 25.3	8.6	24 52.60	24 29.7	35 15.80	+12.63	+0 14.33	+ 8.43	-2.20	- 5.90	14 25 8.94	50 46 9.7
14 28 41.8	9.2	29 7.00	28 38.8	52 47.25	+22.92	+0 14.30	+ 9.28	-2.14	- 5.80	14 29 23.27	51 28 49.9
14 30 11.4	8.8	30 37.24	30 12.3	49 32.70	+20.22	+0 14.30	+ 9.52	-2.15	- 5.70	14 30 53.47	51 32 2.3
14 30 58.4	8.8	31 24.42	31 14.9	55 12.05	+ 7.73	+0 14.30	+ 9.17	-2.15	- 5.65	14 31 40.65	51 26 10.2
14 41 4.1	9.2	41 28.46	41 19.2	31 15.15	+ 7.67	+0 14.32	+ 8.62	-2.18	- 5.00	14 41 44.62	50 50 8.3
14 53 35.8	7.5	53 58.48	53 27.2	45 26.30	+25.93	+0 14.31	+ 8.06	-2.23	- 4.30	14 54 14.46	50 36 17.0
14 59 58.2	9.5	0 21.36	0 5.7	20 19.20	+13.17	+0 14.32	+ 7.63	-2.23	- 3.85	15 0 37.33	50 1 12.1
15 1 6.9	8.8	1 29.50	1 9.5	23 34.80	+16.79	+0 14.32	+ 7.84	-2.22	- 3.80	15 1 45.48	49 58 0.5
15 3 7.8	8.4	3 31.80	3 14.7	37 35.10	+13.52	+0 14.28	+10.72	-2.35	- 4.10	15 3 47.35	52 43 59.8
15 3 44.7	5.5	4 5.74	3 52.8	49 28.05	+10.70	+0 14.31	+ 8.58	-2.26	- 3.75	15 4 21.51	50 32 22.3
15 5 21.3	9.3	5 43.40	5 25.2	37 4.10	+15.03	+0 14.31	+ 8.52	-2.28	- 3.70	15 5 59.20	50 44 30.8
15 15 34.2	8.3	15 54.32	15 38.3	37 25.45	+12.64	+0 14.26	+10.73	-2.39	- 3.40	15 16 9.68	52 44 10.9
15 20 32.8	8.3	20 52.82	20 42.5	42 30.00	+ 8.34	+0 14.28	+ 9.61	-2.37	- 2.95	15 21 8.27	51 39 2.0

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
15 21 45.3	9.0	22 5.48	21 55.0	33 22.50	+ 8.48	+0 14.28	+ 9.87	-2.38	- 2.90	15 22 20.90	51 48 10.1
ZONE 243, JUNE 25, 1873.											
14 44 43.4	6.0	45 7.84	44 46.6	36 34.00	+15.97	+0 9.96	+12.90	-2.19	- 6.95	14 45 19.26	54 45 1.6
14 46 8.6	9.0	46 33.46	46 12.4	54 22.10	+16.01	+0 9.97	+12.82	-2.19	- 6.75	14 46 44.90	54 27 13.8
14 47 33.7	7.8	47 59.70	47 43.0	15 30.05	+13.09	+0 10.00	+11.07	-2.15	- 6.55	14 48 11.31	53 6 1.6
14 48 31.5	9.8	48 57.20	48 47.7	19 9.20	+ 7.28	+0 9.98	+12.47	-2.19	- 6.65	14 49 8.66	54 2 18.0
14 49 9.2	8.9	49 35.02	49 30.8	49 54.90	+ 3.18	+0 9.97	+13.04	-2.21	- 6.65	14 49 46.39	54 31 28.9
14 51 3.4	9.2	51 28.94	51 1.0	23 45.55	+21.42	+0 9.97	+12.18	-2.20	- 6.50	14 51 40.35	53 57 56.0
14 52 41.9	9.0	53 5.74	52 34.9	20 49.30	+23.62	+0 9.97	+11.93	-2.21	- 6.40	14 53 17.12	54 0 54.5
14 53 24.9	8.5	53 48.78	53 31.8	12 47.55	+13.00	+0 9.97	+12.43	-2.22	- 6.40	14 54 0.13	54 8 46.2
14 55 15.5	8.3	55 39.08	55 3.6	59 43.30	+27.00	+0 9.96	+12.55	-2.23	- 6.35	14 55 50.37	54 22 4.8
14 55 16.6	7.0	55 40.44	55 56.3	59 43.30	-12.09	+0 9.96	+12.79	-2.23	- 6.35	14 55 51.73	54 21 26.0
14 57 35.1	9.3	57 59.76	57 28.2	16 12.05	+24.19	+0 9.97	+12.07	-2.24	- 6.20	14 58 11.04	54 5 33.2
15 1 41.7	9.1	2 5.50	1 35.6	10 53.00	+22.84	+0 9.96	+12.17	-2.26	- 6.00	15 2 16.70	54 10 51.7
15 3 1.1	6.5	3 25.56	3 3.1	8 9.25	+17.58	+0 9.98	+11.37	-2.22	- 5.80	15 3 36.89	53 13 29.8
15 4 19.4	7.7	4 43.28	4 21.6	37 19.85	+16.76	+0 9.96	+11.87	-2.25	- 5.80	15 4 54.50	53 44 19.0
15 5 18.2	9.2	5 43.50	5 24.7	26 33.75	+14.80	+0 9.99	+10.95	-2.23	- 5.65	15 5 54.84	52 55 2.5
15 7 29.9	9.1	7 53.50	7 28.6	20 25.10	+19.10	+0 9.96	+12.02	-2.28	- 5.70	15 8 4.63	54 1 16.8
15 8 29.9	8.3	8 53.12	8 23.0	52 25.55	+22.83	+0 9.95	+12.60	-2.30	- 5.70	15 9 4.16	54 29 20.8
15 9 50.9	9.5	10 14.50	9 53.6	1 22.50	+15.91	+0 9.95	+12.49	-2.30	- 5.60	15 10 25.54	54 20 17.1
15 11 24.0	8.5	11 46.62	11 23.1	8 56.35	+17.94	+0 9.95	+12.53	-2.31	- 5.50	15 11 57.65	54 12 45.6
15 14 39.8	9.4	15 1.82	14 36.3	20 52.40	+19.56	+0 9.96	+12.05	-2.31	- 5.35	15 15 12.84	54 0 51.2
15 17 2.8	7.5	17 25.38	17 56.5	59 10.40	+21.96	+0 9.94	+12.58	-2.34	- 5.25	15 17 36.29	54 22 36.6
15 18 31.9	9.0	18 56.66	18 33.8	57 21.20	+17.40	+0 9.94	+12.62	-2.35	- 5.15	15 19 7.54	54 24 21.6
15 19 48.4	8.9	20 9.60	19 49.1	13 59.15	+15.68	+0 9.95	+12.51	-2.34	- 5.10	15 20 20.52	54 7 42.0
15 20 38.5	6.6	21 0.54	20 33.5	42 27.10	+20.39	+0 9.94	+12.84	-2.37	- 5.10	15 21 11.35	54 39 19.2
15 23 18.0	8.3	23 40.40	23 10.8	41 42.95	+22.89	+0 9.96	+11.70	-2.34	- 4.85	15 23 51.34	53 40 5.3
15 24 28.0	9.0	24 49.76	24 30.9	39 20.45	+14.26	+0 9.94	+13.15	-2.38	- 4.90	15 25 0.52	54 42 20.8
15 26 37.0	9.0	26 59.16	26 37.7	7 16.10	+16.40	+0 9.95	+12.47	-2.37	- 4.70	15 27 9.97	54 14 27.1
15 55 57.3	7.5	56 15.40	56 4.0	51 22.85	+ 8.85	+0 9.93	+11.72	-2.45	- 3.10	15 56 25.92	53 30 17.8
ZONE 244, JUNE 29, 1873.											
14 47 33.7	7.5	48 1.84	47 35.4	15 36.90	+20.69	+0 7.77	+10.59	-2.06	- 7.15	14 48 11.31	53 6 2.0
14 49 9.2	9.0	49 37.12	49 30.5	49 57.40	+ 5.00	+0 7.73	+12.62	-2.12	- 7.30	14 49 46.34	54 31 27.8
14 51 3.4	9.3	51 31.02	50 54.0	23 51.45	+28.41	+0 7.75	+11.64	-2.11	- 7.15	14 51 40.30	53 57 56.6
14 52 41.9	8.9	53 7.74	52 34.5	20 51.30	+25.46	+0 7.74	+11.50	-2.12	- 7.10	14 53 16.98	54 0 53.9
14 53 24.9	8.6	53 50.90	53 29.8	12 50.55	+16.13	+0 7.74	+11.97	-2.13	- 7.10	14 54 0.11	54 8 45.9
14 55 15.5	7.5	55 41.24	55 5.4	59 43.30	+27.22	+0 7.72	+12.14	-2.15	- 7.05	14 55 50.37	54 22 4.6
14 55 16.6	6.8	55 42.60	55 58.5	59 43.30	-12.09	+0 7.72	+12.40	-2.15	- 7.05	14 55 51.73	54 21 25.6
14 57 35.1	9.2	58 1.90	57 32.7	16 10.55	+22.35	+0 7.74	+11.68	-2.15	- 6.90	14 58 11.04	54 5 32.5
15 1 41.7	8.8	2 7.72	1 46.1	10 46.40	+16.50	+0 7.73	+11.83	-2.18	- 6.70	15 2 16.77	54 10 51.7
15 3 1.1	7.0	3 27.64	3 0.6	8 11.95	+21.10	+0 7.76	+10.93	-2.15	- 6.50	15 3 36.82	53 13 30.2
15 4 19.4	7.1	4 45.36	4 23.3	37 20.00	+17.06	+0 7.74	+11.48	-2.17	- 6.55	15 4 54.44	53 44 18.7
15 5 18.2	9.0	5 45.60	5 24.2	26 36.40	+16.84	+0 7.77	+10.55	-2.15	- 6.35	15 5 54.80	52 55 1.5
15 7 29.9	9.0	7 55.54	7 32.2	20 23.50	+17.87	+0 7.73	+11.62	-2.20	- 6.40	15 8 4.52	54 1 16.8
15 8 29.9	8.1	8 55.24	8 31.0	52 21.40	+18.35	+0 7.71	+12.25	-2.22	- 6.45	15 9 4.12	54 29 20.0
15 9 50.9	9.6	10 16.48	9 59.7	1 16.60	+12.78	+0 7.71	+12.10	-2.22	- 6.35	15 10 25.36	54 20 19.4
15 11 24.0	8.6	11 48.84	11 26.2	8 54.85	+17.25	+0 7.72	+12.10	-2.22	- 6.25	15 11 57.73	54 12 45.9
15 14 39.8	9.4	15 3.92	14 30.8	20 58.90	+25.38	+0 7.73	+11.54	-2.23	- 6.05	15 15 12.79	54 0 50.1

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
15 17 2.8	7.8	17 27.52	17 2.6	59 6.25	+18.93	+0 7.71	+12.24	-2.26	-6.00	15 17 36.28	54 22 37.3
15 18 31.9	9.0	18 58.80	18 29.9	57 25.20	+21.96	+0 7.71	+12.12	-2.27	-5.95	15 19 7.53	54 24 21.5
15 19 48.4	8.9	20 11.70	19 44.9	14 5.25	+20.50	+0 7.73	+11.98	-2.26	-5.85	15 20 20.48	54 7 40.2
15 20 38.5	6.7	21 2.78	20 44.7	42 19.55	+13.67	+0 7.70	+12.49	-2.29	-5.90	15 21 11.43	54 39 19.6
15 23 18.0	8.6	23 42.56	23 7.8	41 46.65	+26.91	+0 7.73	+11.23	-2.26	-5.65	15 23 51.35	53 40 5.1
15 24 28.0	9.0	24 51.84	24 37.2	39 17.85	+11.01	+0 7.71	+12.72	-2.30	-5.70	15 25 0.45	54 42 19.6
15 26 37.0	9.0	27 1.38	26 32.5	7 20.80	+22.56	+0 7.71	+11.95	-2.30	-5.55	15 27 10.02	54 14 27.9
15 55 57.3	8.3	56 17.56	55 52.9	51 31.15	+19.18	+0 7.71	+11.20	-2.38	-4.05	15 56 25.93	53 30 19.1
15 58 25.0	6.0	58 45.80	58 11.8	6 8.20	+26.54	+0 7.71	+10.68	-2.39	-3.90	15 58 54.17	53 15 49.4
15 59 51.9	8.8	0 13.46	59 46.7	36 42.05	+20.68	+0 7.69	+11.46	-2.41	-3.85	16 0 21.72	53 45 10.7
ZONE 245, JULY 6, 1873.											
15 3 44.7	6.0	4 18.82	3 53.0	49 36.75	+21.41	+0 0.99	+8.51	-1.93	-7.15	15 4 21.60	50 32 22.2
15 8 29.9	8.8	9 1.90	8 34.8	52 22.40	+20.55	+0 0.88	+12.48	-2.06	-7.50	15 9 4.11	54 29 19.9
15 22 53.3	7.5	23 28.72	23 0.9	18 28.35	+22.81	+0 0.97	+8.96	-2.04	-6.50	15 23 31.23	51 3 15.6
15 24 5.3	9.0	24 39.40	24 28.5	13 4.00	+11.00	+0 0.95	+9.20	-2.08	-6.60	15 24 41.73	52 8 28.5
15 26 52.7	9.0	27 23.96	26 53.2	56 8.25	+23.95	+0 0.91	+11.12	-2.13	-6.70	15 27 26.05	53 25 39.4
15 52 25.2	8.8	52 53.36	52 18.1	50 43.75	+26.75	+0 0.86	+12.25	-2.28	-5.75	15 52 54.89	54 31 12.4
15 55 5.2	7.0	55 38.34	55 0.9	22 23.00	+30.73	+0 0.97	+8.63	-2.18	-5.25	15 55 40.45	50 59 34.4
15 55 57.3	6.8	56 24.38	56 8.0	51 24.40	+12.73	+0 0.90	+11.50	-2.27	-5.50	15 56 26.05	53 30 17.8
15 59 48.7	9.0	0 18.16	59 47.2	46 49.25	+24.58	+0 0.92	+10.34	-2.25	-5.25	16 0 19.94	52 35 4.4
16 1 5.3	8.1	1 32.22	1 2.1	36 7.60	+22.62	+0 0.85	+12.65	-2.32	-5.45	16 1 33.61	54 45 46.4
16 4 39.1	8.7	5 9.28	4 53.3	52 53.45	+13.01	+0 0.94	+9.50	-2.23	-4.90	16 5 11.19	51 28 48.9
16 17 5.6	9.4	17 32.74	17 6.2	59 52.60	+20.64	+0 0.84	+12.64	-2.37	-4.65	16 17 33.99	54 22 2.7
ZONE 246, JULY 9, 1873.											
15 3 44.7	6.0	4 20.96	4 5.3	49 27.95	+12.94	-0 1.31	+8.69	-1.87	-7.55	15 4 21.50	50 32 21.8
15 22 53.3	7.5	23 30.80	23 54.5	17 46.35	-19.52	-0 1.33	+9.00	-1.98	-7.00	15 23 31.07	51 3 14.3
15 52 25.2	9.0	52 55.50	52 22.2	50 41.45	+25.16	-0 1.43	+12.36	-2.21	-6.35	15 52 54.81	54 31 12.1
15 55 5.2	7.0	55 40.56	55 12.4	22 15.60	+23.17	-0 1.33	+8.84	-2.13	-5.80	15 55 40.42	50 59 33.4
15 55 57.3	7.8	56 26.62	56 0.9	51 29.80	+19.95	-0 1.41	+11.46	-2.20	-6.10	15 56 26.05	53 30 18.4
15 59 48.7	9.2	0 20.30	59 57.6	46 42.55	+18.00	-0 1.38	+10.53	-2.19	-5.85	16 0 19.84	52 35 3.6
16 1 5.3	8.8	1 34.40	1 21.8	35 52.90	+9.49	-0 1.44	+12.86	-2.26	-6.05	16 1 33.56	54 45 47.1
16 4 39.1	9.0	5 11.44	4 41.5	53 3.30	+24.30	-0 1.36	+9.41	-2.18	-5.50	16 5 11.10	51 28 49.2
16 21 53.0	...	22 25.80	22 22.9	47 6.65	+2.40	-0 1.35	+8.62	-2.23	-4.70	16 22 25.40	50 34 26.6
ZONE 247, JULY 30, 1873.											
16 28 42.1	8.8	29 29.78	29 16.5	54 39.97	+11.05	-0 16.51	+8.60	-1.81	-8.20	16 29 14.62	50 27 1.1
16 30 34.8	8.7	31 20.24	30 51.9	10 17.95	+21.62	-0 16.61	+11.78	-1.87	-8.55	16 31 4.48	54 11 36.8
16 33 50.2	9.0	34 30.78	33 56.1	30 33.90	+26.08	-0 16.64	+12.30	-1.90	-8.50	16 34 14.85	54 51 26.4
16 34 50.0	9.0	35 33.02	35 6.0	16 44.65	+20.67	-0 16.63	+11.81	-1.89	-8.45	16 35 17.20	54 5 10.0
16 38 21.2	7.9	39 5.82	38 36.6	3 22.25	+22.78	-0 16.59	+11.14	-1.90	-8.30	16 38 50.11	53 18 34.6
16 38 58.3	8.7	39 43.56	39 29.1	30 18.65	+11.16	-0 16.61	+11.53	-1.90	-8.35	16 39 27.76	53 51 27.0
16 42 40.5	8.7	43 24.30	42 57.5	20 12.35	+21.14	-0 16.60	+10.45	-1.91	-8.20	16 43 8.58	53 1 42.9
16 46 2.9	6.8	46 46.44	46 24.1	13 54.80	+17.46	-0 16.60	+11.12	-1.93	-8.15	16 46 30.67	53 7 58.1
16 48 16.6	8.2	48 59.78	48 35.2	7 22.60	+18.77	-0 16.63	+12.08	-1.96	-8.20	16 48 43.80	54 14 32.9
16 49 47.0	8.9	50 29.46	50 1.2	24 52.10	+21.21	-0 16.65	+13.08	-1.96	-8.15	16 50 13.36	54 57 7.1

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
16 54 16.5	8.9	55 1.26	54 38.3	10 45.50	+17.99	-0 16.60	+10.78	-1.97	- 8.00	16 54 45.40	53 11 9.1
16 55 34.1	8.0	56 18.34	55 59.4	52 0.00	+15.02	-0 16.57	+10.26	-1.96	- 7.90	16 56 2.61	52 29 51.4
16 58 4.6	8.6	58 47.88	58 12.9	29 40.10	+26.94	-0 16.62	+11.85	-2.00	- 7.95	16 58 31.87	53 52 25.2
17 0 43.4	8.4	1 24.96	0 42.9	58 0.00	+32.78	-0 16.62	+10.86	-2.00	- 7.85	17 1 9.01	53 24 10.7
17 0 43.4	9.0	1 26.20	.....	.....	.....	-0 16.62	.....	-2.00	.....	17 1 10.25	.....
17 1 45.0	9.0	2 28.34	2 13.1	3 17.50	+11.86	-0 16.61	+11.30	-2.01	- 7.85	17 2 12.39	53 18 32.9
17 5 57.7	9.1	6 41.02	6 5.6	28 28.60	+27.88	-0 16.59	+10.62	-2.02	- 7.70	17 6 25.12	52 53 38.0
17 7 8.6	8.7	7 50.60	7 17.9	42 56.50	+24.70	-0 16.65	+12.45	-2.05	- 7.85	17 7 34.37	54 39 8.8
17 7 11.1	8.1	7 52.42	7 42.2	42 56.00	+ 7.70	-0 16.65	+12.70	-2.05	- 7.85	17 7 36.19	54 38 52.5
17 8 44.5	9.0	9 27.50	9 3.1	10 48.90	+19.50	-0 16.57	+ 9.75	-2.02	- 7.60	17 9 11.69	52 11 9.0
17 10 19.0	8.0	11 2.16	10 34.7	55 12.35	+21.80	-0 16.58	+ 9.89	-2.03	- 7.55	17 10 46.30	52 26 48.4
17 11 39.1	8.3	12 22.60	12 8.4	36 37.15	+10.96	-0 16.63	+11.61	-2.06	- 7.65	17 12 6.49	53 45 14.6
17 13 22.0	7.0	14 4.36	13 35.0	26 50.10	+23.14	-0 16.59	+10.54	-2.05	- 7.55	17 13 48.40	52 55 13.1
17 14 15.8	9.0	14 59.70	14 29.2	25 5.75	+23.99	-0 16.59	+10.47	-2.05	- 7.55	17 14 43.73	52 56 58.4
17 15 9.6	8.8	15 52.38	15 38.4	36 0.35	+10.80	-0 16.63	+11.53	-2.07	- 7.60	17 15 36.24	53 45 51.8
17 16 32.5	8.2	17 15.10	16 54.2	21 28.55	+16.80	-0 16.57	+ 9.68	-2.05	- 7.40	17 16 59.26	52 0 28.2
17 17 33.0	9.2	18 16.80	17 59.4	6 39.60	+13.90	-0 16.58	+10.00	-2.06	- 7.40	17 18 0.91	52 15 14.7
17 18 58.7	8.8	19 40.18	19 23.2	23 45.50	+13.05	-0 16.64	+12.09	-2.09	- 7.50	17 19 23.98	53 58 10.2
17 20 29.7	8.1	21 11.00	20 46.1	54 12.55	+19.35	-0 16.63	+11.50	-2.09	- 7.45	17 20 54.87	53 27 49.2
17 22 36.3	9.1	23 17.12	22 41.9	41 17.45	+26.57	-0 16.66	+12.22	-2.12	- 7.50	17 23 0.76	54 40 52.5
ZONE 248, AUGUST 5, 1873.											
16 29 8.4	8.0	29 57.10	.....	.....	.....	-0 19.46	.....	-1.66	.....	16 29 39.14	.....
16 38 21.2	8.5	39 8.54	38 44.6	3 15.35	+18.64	-0 19.52	+11.56	-1.73	- 9.15	16 38 50.07	53 18 34.3
16 38 58.3	9.0	39 46.40	39 41.3	30 9.60	+ 3.93	-0 19.55	+11.91	-1.74	- 9.20	16 39 27.82	53 51 25.7
16 42 40.5	9.0	43 27.08	43 2.9	20 8.30	+19.00	-0 19.53	+10.84	-1.75	- 9.05	16 43 8.59	53 1 41.8
16 46 2.9	7.0	46 49.08	46 19.8	13 59.70	+22.95	-0 19.53	+11.39	-1.77	- 9.00	16 46 30.54	53 7 55.5
16 48 16.6	8.5	49 2.56	48 34.2	7 23.35	+21.67	-0 19.55	+12.43	-1.79	- 9.10	16 48 43.83	54 14 31.9
16 49 47.0	8.9	50 32.26	50 6.3	24 48.30	+19.49	-0 19.57	+13.51	-1.80	- 9.05	16 50 13.40	54 57 6.1
16 54 16.5	9.0	55 4.06	54 34.8	10 47.95	+22.92	-0 19.53	+11.03	-1.81	- 8.90	16 54 45.43	53 11 8.4
16 55 34.1	7.7	56 21.20	55 55.9	52 2.55	+20.10	-0 19.51	+10.53	-1.81	- 8.85	16 56 2.68	52 29 50.7
16 58 4.6	8.6	58 50.52	58 34.7	29 24.05	+12.16	-0 19.55	+12.44	-1.84	- 8.95	16 58 31.74	53 52 23.5
17 0 43.4	8.2	1 27.82	.....	.....	.....	-0 19.54	.....	-1.84	.....	17 1 9.11	.....
17 0 43.4	9.1	1 28.96	.....	.....	.....	-0 19.54	.....	-1.84	.....	17 1 10.25	.....
17 2 45.8	9.5	3 31.36	3 14.9	0 34.40	+12.86	-0 19.54	+11.37	-1.86	- 8.80	17 3 12.62	53 21 13.7
17 5 57.7	9.2	6 43.90	6 19.6	28 18.65	+19.14	-0 19.52	+11.13	-1.87	- 8.75	17 6 25.22	52 53 36.1
17 7 8.6	8.6	7 53.36	7 27.1	42 49.35	+19.86	-0 19.57	+12.96	-1.89	- 8.85	17 7 34.37	54 39 8.0
17 7 11.1	9.1	7 55.22	7 50.9	42 49.35	+ 3.25	-0 19.57	+13.13	-1.89	- 8.85	17 7 36.23	54 38 51.6
17 8 44.5	9.0	9 30.22	9 6.9	10 45.00	+18.65	-0 19.50	+10.10	-1.87	- 8.60	17 9 11.63	52 11 8.8
17 10 19.0	8.6	11 4.86	10 42.2	55 6.05	+18.16	-0 19.50	+10.39	-1.88	- 8.60	17 10 46.23	52 26 47.9
17 11 39.1	8.8	12 25.44	12 2.3	36 39.70	+17.83	-0 19.54	+11.89	-1.90	- 8.70	17 12 6.58	53 45 15.5
17 13 22.0	7.0	14 7.10	13 41.0	26 43.80	+20.54	-0 19.52	+10.94	-1.90	- 8.60	17 13 48.36	52 55 13.6
17 14 15.8	9.0	15 2.60	14 52.8	24 48.20	+ 7.71	-0 19.52	+11.37	-1.91	- 8.60	17 14 43.84	52 56 56.9
17 15 9.6	8.9	15 55.02	15 32.0	36 3.15	+17.75	-0 19.55	+11.82	-1.92	- 8.65	17 15 36.11	53 45 52.6
17 16 32.5	8.2	17 17.90	16 56.4	21 25.40	+17.28	-0 19.51	+10.02	-1.90	- 8.50	17 16 59.27	52 0 28.4
17 17 33.0	9.0	18 19.56	17 53.6	6 43.70	+20.78	-0 19.52	+10.24	-1.91	- 8.50	17 18 0.88	52 15 14.0
17 18 58.7	8.9	19 43.02	19 16.3	23 50.35	+20.50	-0 19.56	+12.38	-1.94	- 8.60	17 19 24.05	53 58 9.4
17 20 29.7	7.9	21 13.72	20 49.4	54 7.80	+18.89	-0 19.55	+11.89	-1.94	- 8.55	17 20 54.82	53 27 50.2
17 22 36.3	9.2	23 19.86	22 53.2	41 7.75	+20.15	-0 19.58	+12.77	-1.97	- 8.60	17 23 0.73	54 40 52.6

ZONE 249, AUGUST 9, 1873.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
17 10 19.0	8.7	11 6.42	10 35.6	55 13.35	+24.51	-0 21.05	+ 9.97	-1.77	- 9.20	17 10 46.35	52 26 46.4
17 12 33.9	7.8	13 22.38	12 49.3	25 27.00	+26.64	-0 21.04	+ 9.49	-1.78	- 9.15	17 13 2.36	51 56 35.8
17 15 10.0	8.4	15 59.82	15 38.8	19 48.35	+17.24	-0 21.02	+ 9.31	-1.79	- 9.00	17 15 39.91	51 2 5.5
17 16 46.9	7.8	17 33.96	17 7.2	33 57.45	+21.63	-0 21.03	+ 9.90	-1.80	- 9.10	17 17 13.94	51 48 1.5
17 19 1.3	9.6	19 47.52	19 19.6	30 41.55	+21.48	-0 21.11	+11.63	-1.83	- 9.25	17 19 27.14	53 51 19.2
17 23 44.2	7.8	24 31.24	23 57.3	22 36.30	+27.25	-0 21.05	+ 9.80	-1.84	- 9.05	17 24 11.12	51 59 29.5
17 24 52.3	8.5	25 39.44	25 11.7	54 49.50	+21.02	-0 21.12	+12.78	-1.86	- 9.25	17 25 18.91	54 27 13.0
17 25 38.1	9.7	26 24.68	26 32.6	1 49.95	- 6.16	-0 21.10	+11.35	-1.86	- 9.10	17 26 4.31	53 19 44.2
17 26 47.8	9.6	27 35.04	27 41.7	20 47.15	- 5.26	-0 21.09	+10.88	-1.86	- 9.10	17 27 14.72	53 0 47.7
17 29 0.7	7.9	29 47.32	29 18.0	41 9.70	+22.66	-0 21.08	+10.39	-1.87	- 9.05	17 29 27.04	52 40 53.0
17 29 55.4	9.5	30 43.16	30 32.1	52 3.80	+ 8.82	-0 21.07	+10.50	-1.87	- 9.00	17 30 22.91	52 29 45.3
17 31 43.8	9.1	32 31.64	32 4.4	17 31.00	+21.83	-0 21.06	+ 9.98	-1.87	- 8.95	17 32 11.45	52 4 31.0
17 33 26.9	9.0	34 12.70	33 37.0	43 10.85	+28.28	-0 21.07	+10.50	-1.88	- 9.00	17 33 52.41	52 38 58.4
17 34 26.4	8.9	35 14.18	35 2.9	7 11.30	+ 8.83	-0 21.10	+11.29	-1.90	- 9.00	17 34 53.77	53 14 39.4
17 35 43.3	8.6	36 29.18	36 8.8	37 55.55	+15.75	-0 21.11	+11.86	-1.90	- 9.05	17 36 8.69	53 44 2.8
17 37 18.1	7.0	38 3.76	37 29.9	58 13.50	+26.39	-0 21.11	+11.35	-1.91	- 9.00	17 37 43.31	53 23 55.2
17 38 54.1	8.8	39 39.50	39 9.5	51 50.50	+23.29	-0 21.11	+11.34	-1.92	- 8.95	17 39 19.01	53 30 15.6
17 40 58.8	4.0	41 43.28	41 14.2	30 47.95	+22.41	-0 21.12	+11.61	-1.94	- 8.95	17 41 22.72	53 51 17.9
17 42 42.3	9.1	43 28.46	43 4.7	53 18.00	+18.49	-0 21.12	+11.59	-1.94	- 8.90	17 43 7.94	53 28 44.2
17 45 10.9	8.6	45 57.62	45 25.2	46 50.60	+25.11	-0 21.12	+11.40	-1.95	- 8.90	17 45 37.07	53 35 18.5
17 48 13.8	8.0	49 1.48	48 34.2	13 24.10	+22.36	-0 21.06	+ 9.15	-1.94	- 8.70	17 48 41.31	51 8 40.7
17 49 51.9	9.1	50 36.98	50 10.8	55 43.90	+20.38	-0 21.12	+11.17	-1.97	- 8.80	17 50 16.43	53 26 21.2
17 51 15.4	9.1	52 4.20	51 31.5	23 33.45	+25.69	-0 21.13	+12.05	-1.99	- 8.85	17 51 43.55	53 58 38.0
17 52 10.4	9.0	52 54.98	52 38.2	35 29.00	+12.96	-0 21.12	+11.62	-1.99	- 8.80	17 52 34.37	53 46 29.5
17 53 56.9	8.2	54 40.60	54 6.2	54 48.95	+26.74	-0 21.13	+11.60	-1.99	- 8.75	17 54 20.02	53 27 23.6
17 55 47.6	8.9	56 35.96	56 6.6	8 59.00	+24.04	-0 21.06	+ 9.28	-1.97	- 8.60	17 56 15.75	51 13 9.1

ZONE 250, AUGUST 11, 1873.

17 10 19.0	8.5	11 7.22	10 49.9	55 2.25	+13.76	-0 21.90	+10.38	-1.72	- 9.50	17 10 46.35	52 26 47.7
17 10 49.7	9.0	11 38.10	11 51.4	36 11.20	-10.51	-0 21.91	+11.85	-1.73	- 9.60	17 11 17.16	52 45 15.9
17 12 33.9	7.8	13 23.14	13 4.9	25 15.05	+14.64	-0 21.89	+ 9.76	-1.73	- 9.40	17 13 2.32	51 56 35.6
17 15 10.0	8.5	16 0.52	15 35.4	19 51.85	+20.60	-0 21.87	+ 9.35	-1.73	- 9.30	17 15 39.82	51 2 5.0
17 16 46.9	8.0	17 34.74	17 9.7	33 55.80	+20.18	-0 21.88	+10.01	-1.75	- 9.35	17 17 13.92	51 48 1.4
17 19 1.3	9.6	19 48.46	19 15.1	30 43.85	+25.72	-0 21.95	+11.65	-1.77	- 9.55	17 19 27.30	53 51 20.8
17 23 44.2	8.2	24 31.98	23 57.3	22 37.50	+27.90	-0 21.90	+ 9.88	-1.78	- 9.35	17 24 11.07	51 59 28.5
17 24 52.3	8.8	25 40.32	25 22.6	54 41.70	+13.43	-0 21.97	+12.98	-1.80	- 9.55	17 25 19.03	54 27 13.0
17 26 47.8	9.5	27 36.00	27 7.2	21 14.90	+22.62	-0 21.93	+10.82	-1.80	- 9.40	17 27 14.90	53 0 47.3
17 29 0.7	8.3	29 48.12	29 20.8	41 8.10	+21.60	-0 21.92	+10.37	-1.81	- 9.35	17 29 27.06	52 40 53.0
17 31 43.8	9.1	32 32.50	32 13.3	17 24.95	+15.41	-0 21.90	+10.14	-1.82	- 9.30	17 32 11.52	52 4 30.3
17 33 26.9	9.0	34 13.48	33 48.9	43 2.70	+19.49	-0 21.91	+10.75	-1.83	- 9.30	17 33 52.40	52 38 57.5
17 34 26.4	9.1	35 15.10	35 5.9	7 9.90	+ 7.19	-0 21.94	+11.38	-1.84	- 9.35	17 34 53.91	53 14 38.8
17 35 43.3	8.6	36 29.92	36 9.7	37 56.00	+15.60	-0 21.95	+11.96	-1.85	- 9.35	17 36 8.64	53 44 1.9
17 37 18.1	7.9	38 4.46	37 58.4	57 51.00	+ 4.75	-0 21.94	+11.67	-1.86	- 9.30	17 37 43.23	53 23 55.9
17 38 54.1	9.0	39 40.36	39 3.8	51 55.05	+28.42	-0 21.94	+11.34	-1.87	- 9.30	17 39 19.09	53 30 15.6
17 40 58.8	4.0	41 44.02	41 9.5	30 52.50	+26.57	-0 21.95	+11.63	-1.88	- 9.30	17 41 22.69	53 51 17.0
17 42 42.3	...	43 29.35	43 1.6	53 19.15	+21.60	-0 21.95	+11.63	-1.89	- 9.25	17 43 8.05	53 28 45.7
17 52 10.4	9.0	52 55.78	52 37.9	35 30.30	+13.81	-0 21.96	+11.71	-1.93	- 9.20	17 52 34.39	53 46 28.6
17 53 56.9	8.2	54 41.44	54 15.9	54 41.45	+19.82	-0 21.96	+11.81	-1.94	- 9.15	17 54 20.08	53 27 23.9
17 55 47.6	...	56 36.86	56 7.9	8 58.10	+23.71	-0 21.89	+ 9.33	-1.93	- 8.95	17 56 15.86	51 13 9.3

ZONE 251, OCTOBER 5, 1873.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
21 21 42.8	8.3	22 29.38	21 54.4	10 4.55	+28.01	-0 10.16	+ 9.81	-1.76	-20.30	21 22 21.41	52 12 23.8
21 22 25.7	9.2	23 13.38	23 7.5	48 10.90	+ 4.68	-0 10.17	+10.86	-1.76	-20.35	21 23 5.38	52 33 55.2
21 24 10.8	8.4	24 58.98	24 21.4	49 46.25	+29.86	-0 10.16	+ 9.61	-1.79	-20.30	21 24 51.06	51 32 44.0
21 24 58.6	9.2	25 47.53	25 35.0	4 1.80	+10.20	-0 10.16	+ 9.56	-1.79	-20.30	21 25 39.64	51 18 8.8
21 26 23.9	6.4	27 12.16	26 44.9	43 47.55	+22.12	-0 10.16	+ 9.79	-1.81	-20.35	21 27 4.24	51 38 35.3
21 27 8.9	6.5	27 58.34	27 35.7	1 48.30	+18.43	-0 10.16	+ 9.32	-1.81	-20.35	21 27 50.45	51 20 30.5
21 28 25.2	7.0	29 12.60	28 45.9	20 11.85	+20.97	-0 10.18	+10.85	-1.81	-20.45	21 29 4.58	53 2 11.1
21 29 28.1	6.3	30 17.02	29 47.8	13 53.75	+23.92	-0 10.16	+ 9.28	-1.84	-20.35	21 30 9.15	51 8 30.8
21 31 6.5	9.4	31 56.78	31 39.0	26 34.55	+14.33	-0 10.16	+ 9.95	-1.84	-20.40	21 31 48.87	51 55 41.2
21 32 29.7	8.1	33 19.48	32 52.6	16 39.55	+22.06	-0 10.16	+ 9.00	-1.86	-20.40	21 33 11.62	51 5 43.1
21 33 50.3	8.4	34 38.98	34 6.2	25 47.85	+26.40	-0 10.16	+ 9.69	-1.86	-20.40	21 34 31.08	51 56 40.0
21 35 14.0	9.4	36 3.42	35 28.6	19 38.95	+27.95	-0 10.16	+10.17	-1.88	-20.45	21 35 55.51	52 2 51.0
21 37 2.4	6.5	37 51.94	37 15.6	39 13.00	+29.37	-0 10.16	+ 9.77	-1.89	-20.45	21 37 44.06	51 43 18.1
21 38 14.3	7.7	39 4.00	38 40.1	32 14.50	+19.28	-0 10.16	+ 9.88	-1.90	-20.45	21 38 56.12	51 50 6.8
21 39 37.2	9.0	40 26.90	40 5.1	8 32.50	+17.82	-0 10.16	+ 9.42	-1.92	-20.45	21 40 19.06	51 13 47.0
21 41 18.9	9.0	42 9.66	41 34.3	7 16.95	+28.93	-0 10.16	+ 9.10	-1.93	-20.45	21 42 1.83	51 15 13.5
21 42 35.7	8.9	43 26.62	42 58.4	1 43.85	+23.00	-0 10.16	+ 9.26	-1.94	-20.45	21 43 18.79	51 20 41.0
21 43 48.3	8.8	44 38.46	44 13.9	28 28.75	+19.82	-0 10.16	+10.08	-1.95	-20.50	21 44 30.59	51 53 53.8
21 44 55.3	6.0	45 44.66	45 16.9	15 34.65	+22.29	-0 10.16	+ 9.91	-1.96	-20.50	21 45 36.78	52 6 50.3
21 46 51.5	8.7	47 42.98	47 14.7	15 7.80	+22.69	-0 10.16	+ 9.88	-1.97	-20.55	21 47 35.12	52 7 17.6
21 48 35.2	9.3	49 27.10	48 51.3	57 20.75	+29.15	-0 10.16	+ 9.29	-1.99	-20.50	21 49 19.28	51 25 10.8
21 50 18.8	7.5	51 8.64	50 35.4	26 20.95	+26.73	-0 10.16	+ 9.75	-2.00	-20.55	21 51 0.80	51 56 8.7
21 51 20.9	8.5	52 11.32	51 39.6	26 20.95	+25.52	-0 10.16	+ 9.78	-2.01	-20.55	21 52 3.49	51 56 7.6
21 52 35.1	8.9	53 27.28	53 6.5	14 34.10	+17.04	-0 10.16	+ 9.45	-2.03	-20.50	21 53 19.49	51 7 45.9
21 53 56.1	8.8	54 47.80	54 21.6	34 27.20	+21.16	-0 10.16	+10.09	-2.03	-20.55	21 54 39.99	51 47 57.6
21 54 53.9	9.5	55 46.60	55 45.3	3 36.65	+ 1.06	-0 10.16	+ 9.67	-2.04	-20.55	21 55 38.82	51 18 27.7
21 55 51.4	8.3	56 43.10	56 29.3	52 58.10	+11.22	-0 10.16	+ 9.72	-2.05	-20.55	21 56 35.31	51 29 16.6
21 57 25.7	9.1	58 17.84	57 49.5	28 9.65	+22.80	-0 10.16	+10.01	-2.07	-20.55	21 58 10.02	51 54 17.0
21 59 58.5	9.0	0 52.10	0 24.7	42 10.85	+22.19	-0 10.16	+ 9.68	-2.08	-20.55	22 0 44.32	51 40 15.1
22 1 12.6	6.5	2 5.02	1 34.5	10 39.45	+24.96	-0 10.16	+ 8.97	-2.09	-20.55	22 1 57.28	51 11 48.7
22 3 1.7	9.3	3 54.38	3 19.0	40 22.65	+28.65	-0 10.16	+ 9.37	-2.11	-20.55	22 3 46.61	51 42 9.7
22 5 12.1	8.8	6 5.38	5 32.2	18 48.05	+27.24	-0 10.16	+ 9.13	-2.13	-20.55	22 5 57.65	51 3 42.8
22 6 9.8	7.3	7 2.14	6 32.9	33 39.35	+23.57	-0 10.16	+ 9.95	-2.13	-20.55	22 6 54.38	51 48 48.8
22 7 54.2	8.9	8 47.52	8 13.5	42 14.95	+27.54	-0 10.16	+ 9.57	-2.14	-20.60	22 8 39.78	51 40 16.8
22 8 52.4	8.3	9 45.54	9 13.1	28 53.70	+26.11	-0 10.16	+10.01	-2.15	-20.60	22 9 37.79	51 53 37.2
22 10 3.0	8.6	10 56.52	10 30.2	7 28.80	+21.50	-0 10.16	+ 9.31	-2.16	-20.55	22 10 48.82	51 14 56.9

ZONE 252, OCTOBER 9, 1873.

21 19 7.1	6.8	19 57.26	19 31.1	15 7.35	+21.47	-0 12.61	+ 9.31	-1.65	-20.95	21 19 47.01	51 7 13.4
21 19 50.8	9.0	20 41.76	.....	.....	.....	-0 12.61	.....	-1.64	.....	21 20 31.46	.....
21 20 19.6	7.9	21 8.75	21 24.9	25 36.35	-13.05	-0 12.62	+10.51	-1.65	-21.00	21 20 58.43	51 56 11.1
21 21 42.8	7.0	22 31.74	22 4.9	9 58.85	+21.45	-0 12.62	+10.51	-1.66	-21.05	21 22 21.41	52 12 23.2
21 22 25.7	8.9	23 15.72	23 39.6	47 48.55	-18.96	-0 12.61	+11.20	-1.66	-21.05	21 23 5.38	52 33 53.9
21 24 10.8	8.5	25 1.32	24 30.0	49 40.75	+24.85	-0 12.61	+10.14	-1.69	-21.10	21 24 51.05	51 32 44.6
21 26 23.9	7.0	27 14.40	26 43.9	43 51.30	+24.71	-0 12.60	+10.18	-1.71	-21.10	21 27 4.14	51 38 34.2
21 27 8.9	6.8	28 0.72	27 42.9	1 46.30	+14.51	-0 12.61	+ 9.81	-1.72	-21.10	21 27 50.47	51 20 28.7
21 28 25.2	7.9	29 15.04	28 51.1	20 11.50	+18.77	-0 12.65	+11.39	-1.71	-21.20	21 29 4.65	53 2 9.3
21 29 28.1	5.5	30 19.40	30 0.4	13 44.10	+15.56	-0 12.61	+ 9.77	-1.74	-21.10	21 30 9.18	51 8 32.1
21 31 6.5	9.4	31 59.26	31 34.4	26 42.10	+20.05	-0 12.63	+10.35	-1.74	-21.15	21 31 48.98	51 55 39.3
21 32 29.7	8.6	33 21.78	32 53.2	16 39.55	+23.45	-0 12.61	+ 9.40	-1.76	-21.15	21 33 11.57	51 5 44.5

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
21 33 50.3	8.0	34 41.30	34 22.9	25 36.05	+14.81	-0 12.63	+10.34	-1.77	-21.20	21 34 31.02	51 56 40.4
21 35 14.0	9.3	36 5.58	35 52.2	19 24.05	+10.76	-0 12.62	+10.86	-1.78	-21.25	21 35 55.31	52 2 48.9
21 37 2.4	6.1	37 54.28	37 25.6	39 8.05	+23.21	-0 12.62	+10.25	-1.80	-21.25	21 37 44.03	51 43 16.9
21 38 14.3	7.0	39 6.32	38 48.9	32 7.90	+14.04	-0 12.60	+10.39	-1.81	-21.25	21 38 56.09	51 50 8.2
21 39 37.2	9.0	40 29.16	40 11.9	8 28.10	+14.15	-0 12.61	+ 9.87	-1.82	-21.25	21 40 18.97	51 13 47.7
21 41 18.9	9.1	42 11.86	41 45.5	7 11.05	+21.57	-0 12.60	+ 9.68	-1.84	-21.25	21 42 1.68	51 15 12.2
21 42 35.7	8.9	43 28.87	43 10.9	1 36.95	+14.68	-0 12.61	+ 9.80	-1.85	-21.30	21 43 18.68	51 20 39.6
21 43 48.3	8.9	44 40.92	44 22.7	28 23.45	+14.66	-0 12.62	+10.58	-1.86	-21.30	21 44 30.68	51 53 54.0
21 44 55.3	5.8	45 46.98	45 27.8	15 27.71	+15.39	-0 12.63	+10.49	-1.87	-21.35	21 45 36.72	52 6 50.4
21 46 51.5	8.9	47 45.26	47 22.7	15 2.50	+18.12	-0 12.62	+10.41	-1.88	-21.35	21 47 35.03	52 7 18.4
21 48 35.2	9.3	49 29.42	49 9.1	57 7.20	+16.53	-0 12.62	+ 9.91	-1.90	-21.35	21 49 19.23	51 25 11.8
21 50 18.8	7.4	51 11.02	50 51.0	26 10.50	+16.10	-0 12.62	+10.38	-1.91	-21.40	21 51 0.81	51 56 8.7
21 51 20.9	...	52 13.68	51 56.3	26 10.50	+14.01	-0 12.63	+10.42	-1.92	-21.40	21 52 3.47	51 56 6.7
21 52 35.1	9.2	53 29.68	53 14.4	14 30.60	+12.54	-0 12.61	+ 9.89	-1.94	-21.35	21 53 19.53	51 7 44.8
21 53 56.1	9.1	54 50.22	54 35.1	34 18.15	+12.19	-0 12.62	+10.60	-1.94	-21.40	21 54 40.04	51 47 57.7
21 57 25.7	9.2	58 19.94	57 58.7	28 4.70	+17.08	-0 12.62	+10.52	-1.97	-21.45	21 58 9.76	51 54 16.2
21 59 58.5	9.2	0 54.24	0 27.2	42 9.15	+21.94	-0 12.62	+10.11	-2.00	-21.45	22 0 44.08	51 40 16.4
22 1 12.6	6.5	2 7.34	1 52.3	10 27.05	+12.27	-0 12.61	+ 9.55	-2.01	-21.45	22 1 57.23	51 11 48.4
22 3 1.7	9.5	3 56.94	3 52.7	39 58.40	+ 3.40	-0 12.62	+10.62	-2.02	-21.45	22 3 46.80	51 42 9.4
22 4 12.0	8.9	5 7.36	4 55.6	51 15.95	+ 9.80	-0 12.61	+ 8.44	-2.03	-21.40	22 4 57.30	50 30 56.2
22 5 12.1	9.0	6 7.58	5 51.2	18 36.00	+13.46	-0 12.61	+ 9.72	-2.04	-21.45	22 5 57.49	51 3 41.1
22 6 9.8	7.6	7 4.36	6 51.6	33 25.50	+10.33	-0 12.62	+10.53	-2.05	-21.50	22 6 54.22	51 48 49.3
22 7 54.2	8.7	8 49.78	8 30.2	43 2.60	+15.88	-0 12.61	+10.27	-2.06	-21.50	22 8 39.67	51 39 17.7
22 8 52.4	7.0	9 48.00	9 29.2	28 43.65	+15.15	-0 12.63	+10.60	-2.07	-21.50	22 9 37.86	51 53 36.3
22 10 3.0	8.8	10 58.88	10 29.3	7 30.80	+24.19	-0 12.61	+ 9.68	-2.08	-21.45	22 10 48.81	51 14 57.4
ZONE 253, OCTOBER 21, 1873.											
21 23 52.0	8.1	24 47.98	24 32.9	47 17.40	+12.52	-0 17.96	+ 8.63	-1.38	-22.65	21 24 32.74	50 33 41.2
21 25 18.9	9.0	26 15.02	25 57.4	42 29.85	+14.57	-0 17.96	+ 8.69	-1.39	-22.70	21 25 59.79	50 38 31.0
21 26 11.4	8.8	27 9.90	27 2.0	18 38.00	+ 6.62	-0 17.96	+ 8.17	-1.41	-22.70	21 26 54.70	50 2 14.5
21 27 42.0	8.4	28 38.38	28 16.6	39 30.65	+17.86	-0 17.96	+ 8.80	-1.41	-22.80	21 28 23.15	50 41 33.7
21 28 52.0	9.0	29 48.64	29 25.0	9 15.40	+19.73	-0 17.96	+ 8.29	-1.43	-22.75	21 29 33.44	50 11 50.5
21 28 52.0	9.2	29 48.64	29 31.9	9 15.40	+13.96	-0 17.96	+ 8.36	-1.43	-22.75	21 29 33.44	50 11 44.8
21 29 51.5	8.8	30 48.90	30 22.9	31 38.35	+21.44	-0 17.96	+ 8.76	-1.43	-22.85	21 30 33.66	50 49 29.8
21 31 7.8	7.0	32 4.50	31 38.2	13 56.95	+22.01	-0 17.96	+ 8.12	-1.46	-22.80	21 31 49.30	50 7 11.3
21 32 8.9	9.2	33 6.98	32 53.6	4 17.30	+11.18	-0 17.96	+ 8.44	-1.46	-22.85	21 32 51.78	50 16 40.5
ZONE 254, OCTOBER 22, 1873.											
21 23 52.0	8.3	24 48.42	24 33.8	47 17.15	+12.11	-0 18.44	+ 8.79	-1.35	-22.75	21 24 32.73	50 33 41.2
21 25 18.9	9.0	26 15.50	25 52.2	42 36.15	+19.29	-0 18.44	+ 8.80	-1.36	-22.80	21 25 59.82	50 38 29.5
21 26 11.4	9.0	27 10.50	26 52.5	18 45.60	+15.09	-0 18.43	+ 8.23	-1.38	-22.80	21 26 54.86	50 2 15.4
21 27 42.0	8.7	28 38.88	28 12.2	39 35.40	+22.08	-0 18.44	+ 8.87	-1.38	-22.90	21 28 23.20	50 41 33.2
21 28 52.0	9.1	29 49.06	29 14.5	9 23.40	+28.92	-0 18.44	+ 8.21	-1.41	-22.90	21 29 33.40	50 11 51.5
21 28 52.0	9.0	29 49.06	29 22.1	9 23.40	+22.57	-0 18.44	+ 8.33	-1.41	-22.90	21 29 33.40	50 11 45.3
21 29 51.5	8.8	30 49.52	30 22.1	31 39.65	+22.60	-0 18.44	+ 8.90	-1.40	-23.00	21 30 33.83	50 49 29.7
21 31 7.8	7.5	32 4.98	31 37.4	13 57.85	+23.10	-0 18.43	+ 8.22	-1.43	-22.95	21 31 49.34	50 7 11.5
21 32 8.9	9.3	33 7.66	32 38.7	4 30.10	+24.20	-0 18.44	+ 8.38	-1.43	-23.00	21 32 52.01	50 16 40.5
21 33 14.0	8.4	34 11.46	33 57.6	27 55.30	+11.45	-0 18.44	+ 9.18	-1.43	-23.10	21 33 55.78	50 53 3.4
21 35 37.9	9.0	36 34.66	36 0.6	24 45.50	+28.08	-0 18.44	+ 9.05	-1.46	-23.15	21 36 18.97	50 56 29.9
21 36 56.3	5.5	37 55.28	37 35.9	43 51.90	+16.07	-0 18.44	+ 8.87	-1.48	-23.20	21 37 39.61	50 37 11.4

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
21 38 5.0	8.5	39 3.46	38 36.3	55 15.00	+22.63	-0 18.44	+ 8.43	-1.49	-23.20	21 38 47.80	50 25 54.5
21 39 15.4	8.8	40 14.34	39 49.3	51 21.15	+20.77	-0 18.44	+ 8.56	-1.50	-23.20	21 39 58.68	50 29 46.8
21 40 47.2	9.2	41 46.22	41 20.0	1 14.70	+21.84	-0 18.44	+ 8.38	-1.52	-23.25	21 41 30.57	50 19 54.2
21 41 51.9	9.2	42 51.54	42 32.6	33 41.30	+15.60	-0 18.45	+ 9.04	-1.52	-23.30	21 42 35.86	50 47 22.1
21 42 46.5	7.4	43 45.12	43 32.3	18 9.65	+10.51	-0 18.45	+ 9.36	-1.53	-23.35	21 43 29.43	51 2 49.0
21 43 25.6	8.2	44 24.34	44 14.0	19 24.25	+ 8.46	-0 18.45	+ 9.40	-1.53	-23.35	21 44 8.66	51 1 32.5
21 45 15.9	7.9	46 14.96	45 51.0	56 10.20	+19.97	-0 18.45	+ 8.50	-1.56	-23.35	21 45 59.31	50 24 57.3
21 46 32.7	9.1	47 33.04	47 6.4	2 57.00	+22.18	-0 18.45	+ 8.40	-1.58	-23.40	21 47 17.39	50 18 12.7
21 48 8.2	8.8	49 6.26	48 41.6	32 41.55	+20.38	-0 18.45	+ 8.97	-1.58	-23.45	21 48 50.60	50 48 27.0
21 48 46.5	8.6	49 45.96	49 33.7	18 15.50	+10.10	-0 18.45	+ 9.36	-1.59	-23.50	21 49 30.28	51 2 43.2
21 50 2.9	8.7	51 3.78	50 41.3	56 24.50	+18.72	-0 18.45	+ 8.51	-1.61	-23.45	21 50 48.14	50 24 42.1
21 51 25.3	7.9	52 25.26	52 0.4	22 13.60	+20.47	-0 18.45	+ 9.15	-1.61	-23.55	21 52 9.60	50 58 55.4
21 52 13.5	8.7	53 14.38	52 59.4	5 55.30	+12.52	-0 18.45	+ 8.40	-1.64	-23.50	21 52 58.74	50 15 5.2
21 52 26.5	8.6	53 29.24	53 32.9	5 55.30	- 3.09	-0 18.45	+ 8.45	-1.64	-23.50	21 53 13.61	50 14 49.6
21 53 51.6	8.5	54 51.06	54 32.9	6 51.55	+15.19	-0 18.45	+ 8.38	-1.65	-23.55	21 54 35.43	50 14 11.7
21 54 57.1	8.6	55 56.86	55 28.8	20 37.05	+23.08	-0 18.45	+ 9.05	-1.65	-23.65	21 55 41.20	51 0 34.7
21 56 13.5	8.8	57 13.60	57 44.9	36 29.10	-25.86	-0 18.45	+ 8.75	-1.67	-23.65	21 56 57.95	50 43 53.5
21 56 20.5	8.7	57 21.66	56 55.2	36 29.10	+21.89	-0 18.45	+ 8.83	-1.67	-23.65	21 57 6.01	50 44 41.4
21 57 20.9	8.9	58 22.26	58 7.9	9 21.10	+12.03	-0 18.45	+ 8.49	-1.69	-23.65	21 58 6.64	50 11 39.3
22 0 1.6	9.0	1 2.86	0 43.5	49 21.55	+16.10	-0 18.45	+ 8.80	-1.71	-23.70	22 0 47.23	50 31 43.4
22 1 9.7	9.2	2 11.82	1 54.6	2 21.65	+14.34	-0 18.45	+ 8.50	-1.72	-23.70	22 1 56.21	50 18 41.3
22 2 21.1	8.6	3 23.28	2 50.5	32 26.60	+27.06	-0 18.45	+ 8.84	-1.73	-23.75	22 3 7.64	50 48 49.5
22 3 26.2	8.8	4 27.40	4 2.6	13 32.95	+20.76	-0 18.44	+ 8.25	-1.75	-23.70	22 4 11.81	50 7 36.4
22 4 30.4	9.2	5 32.22	5 4.4	2 46.90	+23.18	-0 18.45	+ 8.38	-1.75	-23.75	22 5 16.62	50 18 25.0
22 4 57.4	8.0	5 58.10	.....	.....	.....	-0 18.45	.....	-1.76	.....	22 5 42.50	.....
22 5 32.9	6.0	6 34.16	6 31.5	8 26.85	+ 2.26	-0 18.45	+ 8.51	-1.77	-23.75	22 6 18.56	50 12 24.4
22 6 24.8	8.4	7 26.45	7 15.8	39 33.40	+ 8.77	-0 18.45	+ 9.03	-1.77	-23.80	22 7 10.83	50 41 24.9
22 7 21.7	9.0	8 25.28	8 12.9	9 43.60	+10.36	-0 18.45	+ 8.51	-1.78	-23.80	22 8 9.69	50 11 15.8
22 8 32.2	9.1	9 34.86	9 14.6	7 54.45	+16.96	-0 18.45	+ 8.40	-1.80	-23.80	22 9 19.26	50 13 11.6
22 9 41.3	9.5	10 44.32	10 23.6	42 22.10	+17.14	-0 18.45	+ 8.83	-1.80	-23.85	22 10 28.71	50 38 44.6
22 10 42.9	8.0	11 45.28	11 18.4	58 9.00	+22.40	-0 18.45	+ 8.52	-1.82	-23.85	22 11 29.68	50 23 2.7
22 11 59.5	7.9	13 1.12	12 36.0	39 34.05	+20.76	-0 18.45	+ 8.92	-1.82	-23.90	22 12 45.52	50 41 36.5
22 13 4.6	9.2	14 6.34	13 36.2	36 27.45	+24.87	-0 18.45	+ 8.80	-1.83	-23.90	22 13 50.74	50 44 47.1
22 14 19.5	8.1	15 21.12	14 56.9	43 46.83	+20.04	-0 18.45	+ 8.84	-1.85	-23.90	22 15 5.52	50 37 23.1
22 15 15.0	8.5	16 18.56	15 59.5	54 16.40	+15.88	-0 18.45	+ 8.71	-1.86	-23.90	22 16 2.97	50 26 49.3
22 16 43.5	8.9	17 47.08	17 25.1	29 51.40	+18.13	-0 18.45	+ 9.16	-1.87	-23.95	22 17 31.48	50 51 17.0
22 17 49.0	7.6	18 51.86	18 22.8	22 3.45	+23.91	-0 18.45	+ 9.10	-1.88	-24.00	22 18 36.26	50 59 10.7
22 19 16.3	6.9	20 19.10	20 0.8	43 50.00	+15.16	-0 18.46	+ 8.90	-1.90	-24.00	22 20 3.51	50 37 15.4
22 20 9.0	9.0	21 12.80	20 54.8	15 0.05	+15.08	-0 18.45	+ 8.22	-1.91	-23.95	22 20 57.24	50 6 4.7
22 21 36.1	8.7	22 39.34	22 18.5	53 39.75	+17.29	-0 18.46	+ 8.68	-1.92	-24.00	22 22 23.77	50 27 27.7
22 22 36.3	7.7	23 39.38	23 14.7	41 5.00	+20.44	-0 18.46	+ 8.77	-1.93	-24.00	22 23 23.80	50 40 5.7
ZONE 255, OCTOBER 28, 1873.											
21 36 56.3	5.8	37 58.50	37 39.4	43 50.20	+15.82	-0 21.85	+ 8.70	-1.31	-23.80	21 37 39.59	50 37 11.2
21 38 5.0	8.7	39 6.68	38 37.7	55 15.40	+24.12	-0 21.85	+ 8.42	-1.33	-23.85	21 38 47.77	50 25 54.1
21 39 15.4	8.8	40 17.54	39 53.1	51 18.60	+20.27	-0 21.85	+ 8.53	-1.34	-23.90	21 39 58.63	50 29 47.2
21 40 47.2	9.0	41 49.50	41 22.3	1 13.85	+22.67	-0 21.85	+ 8.33	-1.36	-23.90	21 41 30.60	50 19 54.3
21 41 51.9	9.3	42 54.76	42 27.1	33 47.15	+22.86	-0 21.85	+ 8.76	-1.36	-24.00	21 42 35.84	50 47 21.6
21 42 46.5	7.9	43 48.36	43 20.1	18 20.15	+23.23	-0 21.86	+ 9.04	-1.37	-24.05	21 43 29.42	51 2 49.3
21 43 25.6	9.0	44 27.64	44 20.2	19 19.05	+ 6.08	-0 21.86	+ 9.19	-1.37	-24.05	21 44 8.71	51 1 33.5
21 45 15.9	7.7	46 18.20	45 50.4	56 11.60	+23.13	-0 21.85	+ 8.41	-1.40	-24.05	21 45 59.31	50 24 57.4
21 46 32.7	9.0	47 36.36	47 9.4	2 56.55	+22.46	-0 21.85	+ 8.28	-1.42	-24.10	21 47 17.47	50 18 11.7
21 48 8.2	9.0	49 9.52	48 43.3	32 41.15	+21.61	-0 21.86	+ 8.81	-1.42	-24.20	21 48 50.61	50 48 26.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
21 48 46.5	8.8	49 49.20	49 34.5	18 15.60	+12.07	-0 21.86	+ 9.18	-1.43	-24.25	21 49 30.27	51 2 43.2
21 50 2.9	8.8	51 7.02	50 47.6	56 18.55	+16.14	-0 21.86	+ 8.50	-1.45	-24.20	21 50 48.13	50 24 43.8
21 51 25.3	8.1	52 28.44	52 5.9	22 10.00	+18.50	-0 21.86	+ 9.08	-1.46	-24.30	21 52 9.52	50 58 55.4
21 52 13.5	8.6	53 17.56	52 59.4	5 55.60	+15.19	-0 21.86	+ 8.35	-1.48	-24.25	21 52 58.67	50 15 5.9
21 52 26.5	8.6	53 32.44	53 33.0	5 55.60	- 0.50	-0 21.86	+ 8.44	-1.48	-24.25	21 53 13.56	50 14 50.3
21 53 51.6	8.6	54 54.36	54 33.0	6 52.10	+17.87	-0 21.86	+ 8.31	-1.50	-24.30	21 54 35.47	50 14 12.1
21 54 57.1	8.8	56 0.12	55 44.3	20 24.05	+12.98	-0 21.87	+ 9.17	-1.49	-24.40	21 55 41.20	51 0 36.1
21 56 13.5	8.6	57 16.80	.....	.....	.....	-0 21.86	.....	-1.51	.....	21 56 57.90	.....
21 56 20.5	8.7	57 24.87	57 0.1	36 25.60	+20.49	-0 21.86	+ 8.80	-1.51	-24.45	21 57 5.97	50 44 41.8
21 57 20.9	9.0	58 25.36	58 5.5	9 24.15	+16.63	-0 21.86	+ 8.25	-1.53	-24.40	21 58 6.49	50 11 38.9
21 59 1.4	9.3	0 5.92	59 46.3	33 17.40	+16.18	-0 21.86	+ 8.90	-1.54	-24.50	21 59 47.02	50 47 46.0
22 0 1.6	9.2	1 6.06	0 41.3	49 24.95	+20.58	-0 21.86	+ 8.55	-1.56	-24.50	22 0 47.17	50 31 42.5
22 1 9.7	9.2	2 15.02	2 5.8	2 13.40	+ 7.67	-0 21.86	+ 8.47	-1.57	-24.50	22 1 56.15	50 18 41.2
22 2 21.1	8.8	3 26.50	2 56.9	32 22.25	+24.42	-0 21.86	+ 8.79	-1.58	-24.50	22 3 7.60	50 48 49.5
22 3 26.2	9.0	4 30.78	4 18.2	13 19.55	+10.55	-0 21.86	+ 8.25	-1.60	-24.55	22 4 11.92	50 7 37.9
22 4 30.4	9.0	5 35.40	5 23.6	2 31.85	+ 9.84	-0 21.86	+ 8.45	-1.61	-24.65	22 5 16.53	50 18 25.0
22 4 57.4	8.0	6 1.42	5 52.9	9 36.45	+ 7.10	-0 21.87	+ 8.31	-1.61	-24.60	22 5 42.55	50 11 17.7
22 5 32.9	5.5	6 37.50	6 22.3	8 36.45	+12.70	-0 21.87	+ 8.35	-1.62	-24.55	22 6 18.63	50 12 23.4
22 6 24.8	8.2	7 29.78	7 16.5	39 31.60	+11.00	-0 21.87	+ 8.82	-1.62	-24.65	22 7 10.89	50 41 27.0
22 7 21.7	9.0	8 28.70	8 7.4	9 49.90	+17.80	-0 21.87	+ 8.23	-1.64	-24.65	22 8 9.83	50 11 15.0
22 8 32.2	9.1	9 38.04	9 28.5	7 43.50	+ 7.94	-0 21.87	+ 8.37	-1.65	-24.65	22 9 19.17	50 13 11.7
22 9 41.3	9.5	10 47.58	10 23.0	42 20.60	+20.37	-0 21.87	+ 8.70	-1.66	-24.75	22 10 28.69	50 38 47.4
22 10 42.9	8.0	11 48.52	11 23.5	58 5.50	+20.81	-0 21.87	+ 8.40	-1.67	-24.70	22 11 29.65	50 23 2.8
22 11 59.5	7.7	13 4.36	12 41.7	39 30.85	+18.77	-0 21.87	+ 8.73	-1.68	-24.80	22 12 45.48	50 41 35.7
22 13 4.6	9.2	14 9.76	13 41.3	36 22.50	+23.55	-0 21.87	+ 8.75	-1.69	-24.80	22 13 50.88	50 44 48.9
22 14 19.5	8.8	15 24.38	15 0.7	43 45.05	+19.63	-0 21.87	+ 8.67	-1.70	-24.85	22 15 5.51	50 37 22.4
22 15 15.0	9.1	16 21.76	.....	.....	.....	-0 21.87	.....	-1.73	.....	22 16 2.88	.....
22 15 34.4	8.8	16 41.04	.....	.....	.....	-0 21.87	.....	-1.73	.....	22 16 22.20	.....
22 16 43.5	8.8	17 50.25	17 59.8	29 23.75	- 7.91	-0 21.87	+ 9.04	-1.73	-24.90	22 17 31.37	50 51 16.7
22 17 49.0	8.0	18 55.11	19 4.5	21 30.40	- 7.72	-0 21.88	+ 9.19	-1.74	-24.95	22 18 36.22	50 59 10.4
22 19 16.3	7.0	20 22.48	19 55.8	43 54.35	+22.11	-0 21.87	+ 8.63	-1.75	-24.90	22 20 3.63	50 37 15.9
22 20 9.0	9.0	21 16.04	21 3.2	14 55.00	+10.72	-0 21.87	+ 8.22	-1.77	-24.90	22 20 57.20	50 6 3.5
22 21 36.1	8.7	22 42.66	22 18.6	53 39.35	+20.03	-0 21.87	+ 8.50	-1.78	-24.95	22 22 23.82	50 27 28.8
22 22 36.3	8.0	23 42.64	23 20.9	41 1.20	+17.96	-0 21.87	+ 8.78	-1.79	-25.00	22 23 23.79	50 40 5.2
ZONE 256, NOVEMBER 1, 1873.											
21 59 40.9	7.7	0 44.90	0 36.0	15 14.70	+ 7.30	-0 22.14	+ 9.60	-1.44	-25.00	22 0 25.81	51 5 41.0
22 1 52.5	9.0	2 59.18	2 34.3	59 33.30	+20.73	-0 22.14	+ 8.53	-1.48	-25.00	22 2 40.12	50 21 35.0
22 2 0.7	8.8	3 7.82	2 36.5	59 33.30	+26.06	-0 22.14	+ 8.43	-1.48	-25.00	22 2 48.77	50 21 40.2
22 3 4.9	9.0	4 8.60	3 44.1	25 24.85	+20.15	-0 22.14	+ 9.30	-1.48	-25.05	22 3 49.52	50 55 43.7
22 4 12.0	9.0	5 16.34	4 50.9	50 10.50	+21.08	-0 22.14	+ 8.84	-1.50	-25.05	22 4 57.28	50 30 58.6
22 4 57.4	7.9	6 1.52	5 45.1	9 42.45	+13.45	-0 22.14	+ 8.45	-1.52	-25.05	22 5 42.47	50 11 18.7
22 5 46.5	8.0	6 49.72	6 32.3	39 14.90	+14.08	-0 22.14	+10.11	-1.49	-25.25	22 6 30.62	51 41 48.4
22 7 21.7	9.0	8 28.74	8 5.2	9 51.55	+19.63	-0 22.14	+ 8.37	-1.54	-25.10	22 8 9.70	50 11 15.8
22 8 33.7	7.8	9 36.72	9 9.0	31 49.60	+22.84	-0 22.14	+ 9.10	-1.54	-25.20	22 9 17.66	50 49 21.7
22 9 41.6	8.8	10 47.52	10 26.5	33 27.70	+17.32	-0 22.14	+ 9.09	-1.55	-25.25	22 10 28.47	50 47 38.1
22 10 40.8	8.3	11 44.82	11 24.4	53 17.10	+16.95	-0 22.14	+ 8.75	-1.57	-25.25	22 11 25.78	50 27 48.1
22 12 8.0	9.0	13 14.00	13 12.4	0 58.45	+ 1.33	-0 22.14	+ 8.79	-1.59	-25.25	22 12 54.96	50 19 51.3
22 13 45.5	9.2	14 49.90	14 27.9	28 45.00	+18.12	-0 22.14	+ 9.16	-1.60	-25.35	22 14 30.84	50 52 21.9
22 14 55.7	6.7	16 2.04	15 42.2	59 55.65	+16.49	-0 22.14	+ 8.58	-1.62	-25.30	22 15 43.01	50 21 9.2
22 15 51.4	8.0	16 56.70	16 29.5	31 22.25	+22.42	-0 22.14	+ 9.11	-1.62	-25.40	22 16 37.65	50 49 49.0
22 16 45.2	9.0	17 51.12	17 36.5	45 8.60	+12.10	-0 22.14	+ 9.05	-1.63	-25.40	22 17 32.09	50 35 52.4
22 17 51.6	7.0	18 58.08	18 39.2	47 13.90	+15.67	-0 22.14	+ 8.89	-1.65	-25.40	22 18 39.04	50 33 50.5

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	" "	" "	m s	" "	s "	" "	h m s	° ' "
22 19 34.9	9.7	20 42.08	20 7.2	14 34.60	+29.21	-0 22.14	+ 8.10	-1.67	-25.40	22 20 23.07	50 6 42.7
22 20 26.2	8.7	21 32.56	21 14.6	40 58.70	+14.89	-0 22.14	+ 8.96	-1.67	-25.45	22 21 13.53	50 40 5.2
22 21 55.5	8.0	23 2.00	22 40.4	29 45.80	+17.79	-0 22.14	+ 9.12	-1.69	-25.50	22 22 42.96	50 51 21.2
22 23 7.6	8.0	24 14.14	23 59.0	1 32.50	+12.58	-0 22.14	+ 8.69	-1.71	-25.50	22 23 55.12	50 19 29.0
22 24 8.2	9.0	25 15.68	24 47.1	37 25.00	+23.63	-0 22.14	+ 8.95	-1.72	-25.55	22 24 56.65	50 43 47.8
22 25 9.9	9.1	26 18.80	25 51.1	28 54.00	+22.81	-0 22.14	+ 9.08	-1.72	-25.60	22 25 59.77	50 52 18.1
22 25 45.7	8.6	26 53.02	26 47.0	44 55.60	+ 4.97	-0 22.14	+ 8.95	-1.74	-25.55	22 26 33.99	50 35 58.6
22 27 4.7	9.0	28 13.12	27 53.2	46 44.35	+16.49	-0 22.14	+ 8.91	-1.75	-25.60	22 27 54.10	50 34 21.4
22 28 56.9	8.8	30 5.58	29 52.4	0 56.85	+10.99	-0 22.14	+ 8.74	-1.77	-25.60	22 29 46.58	50 20 3.4
22 30 55.9	9.1	32 4.76	31 47.1	4 31.85	+14.76	-0 22.14	+ 8.52	-1.79	-25.65	22 31 45.76	50 16 32.0
22 32 28.0	8.8	33 36.68	33 13.0	55 16.75	+19.70	-0 22.14	+ 8.78	-1.81	-25.70	22 33 17.68	50 25 52.3
22 33 40.6	9.5	34 49.66	34 17.7	43 17.05	+26.49	-0 22.14	+ 8.78	-1.82	-25.70	22 34 30.65	50 37 58.9
22 34 48.3	9.0	35 57.14	35 45.9	37 0.10	+ 9.25	-0 22.14	+ 9.17	-1.83	-25.75	22 35 38.14	50 43 59.0
22 36 25.6	8.4	37 33.68	37 9.7	48 45.30	+19.48	-0 22.14	+ 9.90	-1.84	-25.85	22 37 14.65	51 32 24.8
22 38 3.5	9.5	39 12.96	38 50.1	53 33.55	+19.03	-0 22.14	+ 8.71	-1.87	-25.75	22 38 53.97	50 27 35.1
22 39 17.1	8.4	40 25.72	40 8.9	31 9.05	+13.85	-0 22.14	+ 9.26	-1.88	-25.85	22 40 6.72	50 49 55.2
22 40 2.3	7.9	41 10.90	40 59.4	54 8.95	+ 9.35	-0 22.14	+ 9.94	-1.88	-25.90	22 40 51.89	51 26 51.2
22 41 37.2	9.0	42 47.58	42 27.9	50 2.00	+16.35	-0 22.14	+ 8.92	-1.91	-25.80	22 42 28.60	50 31 4.4
22 43 7.7	7.0	44 16.82	43 55.7	1 50.00	+17.58	-0 22.14	+ 8.64	-1.93	-25.80	22 43 57.84	50 19 17.4
22 44 2.0	9.2	45 12.76	44 51.2	44 1.80	+17.88	-0 22.14	+ 8.94	-1.94	-25.85	22 44 53.78	50 37 6.2
22 44 55.5	7.8	46 4.78	45 51.5	44 37.50	+10.78	-0 22.14	+10.04	-1.93	-25.95	22 45 45.78	51 36 24.4
22 45 51.9	9.1	47 2.34	46 31.8	45 43.15	+25.27	-0 22.14	+ 8.83	-1.95	-25.90	22 46 43.37	50 35 32.2
22 47 18.8	8.3	48 29.50	48 6.9	29 8.50	+18.62	-0 22.14	+ 9.15	-1.97	-25.95	22 48 10.52	50 52 0.5
22 48 32.4	8.8	49 42.62	49 18.2	3 15.55	+20.34	-0 22.14	+ 8.53	-1.98	-25.85	22 49 23.67	50 17 54.7
22 50 31.8	9.3	51 42.54	51 20.0	28 41.40	+18.53	-0 22.14	+ 9.17	-2.00	-25.95	22 51 23.57	50 52 27.7
22 51 24.6	8.5	52 35.60	52 24.0	33 12.20	+ 9.57	-0 22.14	+ 9.18	-2.01	-25.95	22 52 16.64	50 47 48.0
22 52 26.0	8.5	53 37.74	53 20.5	0 5.65	+14.33	-0 22.14	+ 8.77	-2.03	-25.90	22 53 18.79	50 20 59.0
22 54 22.4	8.0	55 33.08	55 8.3	0 31.15	+20.66	-0 22.14	+ 8.65	-2.05	-25.90	22 55 14.13	50 20 39.8
22 55 4.0	9.4	56 14.42	56 28.3	52 6.10	-11.54	-0 22.14	+ 8.87	-2.06	-25.95	22 55 55.47	50 28 32.9
22 56 38.2	8.7	57 49.44	57 24.0	14 40.10	+20.81	-0 22.14	+ 9.36	-2.07	-26.00	22 57 30.48	51 6 31.7
22 58 14.0	9.0	59 24.90	59 2.1	35 57.05	+18.42	-0 22.14	+10.23	-2.08	-26.10	22 59 5.93	51 45 13.2
22 59 43.1	8.8	0 53.88	0 30.2	15 11.95	+19.43	-0 22.14	+ 9.51	-2.10	-26.00	23 0 34.93	51 5 58.8
23 0 56.0	...	2 8.12	1 44.5	24 39.95	+19.41	-0 22.14	+ 9.19	-2.12	-26.00	23 1 49.18	50 56 30.5
ZONE 257, NOVEMBER 2, 1873.											
21 59 40.9	7.9	0 44.88	0 32.3	15 17.45	+10.33	-0 22.03	+ 9.41	-1.41	-25.10	22 0 25.93	51 5 41.0
22 1 52.5	9.1	2 59.14	2 34.9	59 32.80	+20.15	-0 22.03	+ 8.41	-1.45	-25.10	22 2 40.22	50 21 34.6
22 2 0.7	9.1	3 7.60	2 37.0	59 32.80	+25.48	-0 22.03	+ 8.40	-1.45	-25.10	22 2 48.69	50 21 39.9
22 3 4.9	9.1	4 8.50	3 55.4	25 15.70	+10.78	-0 22.03	+ 9.24	-1.45	-25.20	22 3 49.56	50 55 43.2
22 4 12.0	9.0	5 16.28	5 0.2	50 3.15	+13.36	-0 22.03	+ 8.80	-1.47	-25.15	22 4 57.36	50 30 58.0
22 4 57.4	8.1	6 1.42	5 46.9	9 40.95	+12.11	-0 22.03	+ 8.33	-1.49	-25.15	22 5 42.51	50 11 18.5
22 5 46.5	8.4	6 49.64	6 39.6	39 9.05	+ 8.09	-0 22.03	+ 9.99	-1.47	-25.35	22 6 30.67	51 41 48.0
22 7 21.7	9.2	8 28.66	8 3.4	9 53.05	+21.14	-0 22.03	+ 8.20	-1.52	-25.20	22 8 9.75	50 11 15.5
22 8 33.7	8.0	9 36.60	9 15.3	31 43.15	+17.56	-0 22.03	+ 9.02	-1.52	-25.35	22 9 17.67	50 49 22.6
22 9 41.6	9.0	10 47.36	10 32.7	33 22.55	+12.13	-0 22.03	+ 9.00	-1.53	-25.35	22 10 28.44	50 47 37.8
22 10 40.8	8.3	11 44.68	11 32.9	53 9.90	+ 9.80	-0 22.03	+ 8.67	-1.54	-25.35	22 11 25.78	50 27 47.9
22 11 38.4	8.4	12 44.68	12 33.0	9 50.35	+ 9.78	-0 22.03	+ 8.33	-1.56	-25.30	22 12 25.78	50 11 7.2
22 12 39.6	9.2	13 46.04	13 28.4	0 57.90	+14.66	-0 22.03	+ 8.56	-1.57	-25.35	22 13 27.14	50 20 4.8
22 13 45.5	9.3	14 49.70	14 31.2	28 41.00	+15.23	-0 22.03	+ 9.05	-1.57	-25.45	22 14 30.78	50 52 22.8
22 14 55.7	6.0	16 1.90	15 41.0	59 56.40	+17.41	-0 22.03	+ 8.55	-1.59	-25.45	22 15 43.01	50 21 9.1
22 15 51.4	8.5	16 56.52	16 32.8	31 19.25	+19.54	-0 22.03	+ 9.00	-1.60	-25.50	22 16 37.60	50 49 48.9
22 16 45.2	8.7	17 51.08	17 34.1	45 10.00	+14.08	-0 22.03	+ 8.87	-1.61	-25.50	22 17 32.18	50 35 52.6
22 17 51.6	7.5	18 57.94	18 37.8	47 15.75	+16.67	-0 22.03	+ 8.73	-1.62	-25.50	22 18 39.04	50 33 49.4

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	° "	"	m s	"	s	"	h m s	° ' "
22 20 26.2	8.7	21 32.48	21 5.9	41 6.30	+22.01	-0 22.03	+ 8.83	-1.65	-25.60	22 21 13.58	50 40 4.4
22 21 55.5	7.2	23 1.88	22 39.1	29 47.40	+18.78	-0 22.03	+ 8.95	-1.66	-25.65	22 22 42.98	50 51 20.2
22 23 7.6	8.0	24 14.04	23 58.9	1 36.75	+16.75	-0 22.03	+ 8.50	-1.69	-25.60	22 23 55.15	50 19 28.5
22 24 8.2	9.0	25 15.58	24 49.9	37 23.35	+21.23	-0 22.03	+ 8.84	-1.69	-25.70	22 24 56.69	50 43 46.7
22 25 9.9	9.1	26 18.52	26 4.8	28 43.00	+11.28	-0 22.03	+ 9.09	-1.70	-25.75	22 25 59.62	50 52 17.4
22 25 45.7	7.5	26 52.74	26 45.3	44 57.35	+ 6.13	-0 22.03	+ 8.80	-1.71	-25.70	22 26 33.85	50 35 57.7
22 27 4.7	9.1	28 12.96	27 53.5	46 45.00	+16.16	-0 22.03	+ 8.77	-1.72	-25.75	22 27 54.08	50 34 20.1
22 28 56.9	8.7	30 5.34	29 51.7	0 57.10	+11.33	-0 22.03	+ 8.60	-1.75	-25.75	22 29 46.47	50 20 3.1
22 30 55.9	9.1	32 4.66	31 45.8	4 33.15	+15.76	-0 22.03	+ 8.36	-1.77	-25.80	22 31 45.79	50 16 31.3
22 32 28.0	8.8	33 36.46	33 18.8	55 13.85	+14.51	-0 22.03	+ 8.66	-1.78	-25.80	22 33 17.60	50 25 49.8
22 33 40.6	9.3	34 49.34	34 26.3	43 10.60	+19.04	-0 22.03	+ 8.75	-1.80	-25.85	22 34 30.46	50 37 57.7
22 34 48.3	9.0	35 57.12	35 33.6	37 11.45	+19.42	-0 22.03	+ 8.87	-1.81	-25.85	22 35 38.25	50 43 57.4
22 36 25.6	7.8	37 33.60	37 13.9	48 41.05	+15.99	-0 22.03	+ 9.74	-1.81	-26.00	22 37 14.71	51 32 25.2
22 38 3.5	9.7	39 12.88	38 42.2	53 40.55	+25.51	-0 22.03	+ 8.43	-1.85	-25.90	22 38 54.02	50 27 34.1
22 39 17.1	8.0	40 25.66	40 4.4	31 12.25	+17.56	-0 22.03	+ 9.04	-1.86	-25.95	22 40 6.79	50 49 55.3
22 40 2.3	7.7	41 10.86	40 57.8	54 9.55	+10.66	-0 22.03	+ 9.69	-1.87	-26.05	22 40 51.97	51 26 51.5
22 41 37.2	9.0	42 47.40	42 24.7	50 4.55	+18.84	-0 22.03	+ 8.72	-1.89	-25.95	22 42 28.55	50 31 3.9
22 43 7.7	6.5	44 16.66	43 57.2	1 49.40	+16.25	-0 22.03	+ 8.50	-1.91	-25.95	22 43 57.81	50 19 16.3
22 44 2.0	9.0	45 12.68	44 51.8	44 1.05	+17.30	-0 22.03	+ 8.77	-1.91	-26.00	22 44 53.84	50 37 6.0
22 44 55.5	7.8	46 4.58	45 51.2	44 38.00	+10.86	-0 22.03	+ 9.85	-1.91	-26.15	22 45 45.71	51 36 23.6
22 45 51.9	9.0	47 2.16	46 41.7	45 35.05	+16.98	-0 22.03	+ 8.81	-1.93	-26.05	22 46 43.32	50 35 31.8
22 47 18.8	8.2	48 29.36	48 7.4	29 7.40	+18.12	-0 22.03	+ 8.99	-1.94	-26.10	22 48 10.52	50 52 0.8
22 48 32.4	8.8	49 42.50	49 23.0	3 12.45	+16.26	-0 22.03	+ 8.42	-1.96	-26.05	22 49 23.68	50 17 53.4
22 50 31.8	9.3	51 42.56	51 24.2	28 38.75	+15.15	-0 22.02	+ 9.02	-1.98	-26.10	22 51 23.73	50 52 26.6
22 51 24.6	8.5	52 35.54	52 18.0	33 16.85	+14.44	-0 22.02	+ 8.95	-1.99	-26.10	22 52 16.72	50 47 47.8
22 52 26.0	8.6	53 37.64	53 21.5	0 4.50	+13.41	-0 22.02	+ 8.61	-2.01	-26.10	22 53 18.83	50 20 58.8
22 54 22.4	7.7	55 33.02	55 19.0	0 22.85	+11.66	-0 22.02	+ 8.60	-2.03	-26.10	22 55 14.21	50 20 38.8
22 55 4.0	9.6	56 14.44	56 19.1	52 16.15	- 3.82	-0 22.02	+ 8.72	-2.03	-26.10	22 55 55.64	50 28 30.2
22 56 38.2	8.8	57 49.28	57 19.1	14 44.05	+24.75	-0 22.02	+ 9.10	-2.05	-26.15	22 57 30.46	51 6 31.3
22 58 14.0	8.5	59 24.80	59 1.5	35 58.00	+18.82	-0 22.02	+10.03	-2.06	-26.25	22 59 5.97	51 45 12.3
22 59 43.1	8.7	0 53.64	0 28.2	15 12.55	+20.82	-0 22.02	+ 9.30	-2.08	-26.20	23 0 34.83	51 5 59.1
23 0 56.0	8.6	2 8.06	1 46.3	24 38.00	+17.93	-0 22.02	+ 9.02	-2.10	-26.20	23 1 49.26	50 56 30.6
ZONE 258, NOVEMBER 4, 1873.											
22 31 27.0	5.8	32 32.90	32 18.9	26 58.75	+11.53	-0 21.59	+ 9.18	-1.72	-26.10	22 32 14.50	50 54 1.6
22 33 8.9	9.1	34 16.42	33 49.4	50 29.60	+22.42	-0 21.59	+ 8.65	-1.74	-26.10	22 33 58.04	50 30 41.2
22 34 5.1	8.4	35 12.62	34 45.5	24 9.15	+22.29	-0 21.59	+ 9.03	-1.75	-26.15	22 34 54.23	50 57 1.9
22 35 24.0	8.3	36 31.68	36 5.3	4 34.95	+22.03	-0 21.59	+ 8.28	-1.77	-26.10	22 36 13.31	50 16 35.3
22 36 41.6	8.8	37 50.02	37 24.2	57 47.95	+21.47	-0 21.59	+ 8.47	-1.79	-26.15	22 37 31.65	50 23 21.9
22 38 12.6	7.5	39 21.44	38 53.1	33 43.20	+23.35	-0 21.59	+ 8.83	-1.80	-26.20	22 39 3.06	50 47 29.0
22 39 28.4	8.0	40 37.06	40 11.2	41 12.20	+21.44	-0 21.59	+ 8.81	-1.82	-26.20	22 40 18.68	50 39 58.3
22 41 3.0	8.7	42 12.02	41 49.1	52 56.00	+18.62	-0 21.59	+ 9.67	-1.82	-26.35	22 41 53.63	51 28 12.3
22 42 42.6	9.2	43 52.16	43 27.9	5 50.10	+20.28	-0 21.59	+ 8.41	-1.86	-26.20	22 43 33.80	50 15 18.8
22 43 53.2	8.5	45 3.02	44 33.7	20 26.20	+24.07	-0 21.59	+ 9.14	-1.86	-26.30	22 44 44.65	51 0 47.2
22 47 22.0	9.3	48 30.64	48 1.1	22 48.50	+23.72	-0 21.59	+10.15	-1.89	-26.50	22 48 12.25	51 58 25.6
22 48 39.6	8.8	49 50.60	49 25.8	1 28.05	+20.67	-0 21.59	+ 8.45	-1.92	-26.30	22 49 32.26	50 19 41.5
22 49 48.6	9.0	50 59.25	50 35.8	33 47.30	+18.98	-0 21.59	+10.01	-1.92	-26.50	22 50 40.87	51 47 22.0
22 52 17.0	8.2	53 26.92	52 57.4	24 53.55	+24.27	-0 21.59	+ 8.94	-1.96	-26.40	22 53 8.56	50 56 20.2
22 54 21.4	8.8	55 32.62	55 6.2	8 32.90	+21.59	-0 21.58	+ 9.31	-1.98	-26.45	22 55 14.28	51 12 38.6
22 55 31.9	8.9	56 41.94	56 15.3	39 57.95	+22.00	-0 21.58	+ 8.89	-1.99	-26.40	22 56 23.62	50 41 13.7
22 56 39.1	9.0	57 48.96	57 20.9	44 45.20	+23.28	-0 21.58	+ 8.61	-2.01	-26.45	22 57 30.64	50 36 27.4
22 58 23.6	8.8	59 34.80	59 7.7	19 9.85	+22.25	-0 21.58	+ 9.11	-2.03	-26.50	22 59 16.47	51 2 2.2
23 0 5.7	7.0	1 16.06	0 50.8	57 2.70	+21.06	-0 21.58	+ 8.52	-2.05	-26.45	23 0 57.75	50 24 7.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. W re.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
23 1 5.2	9.5	2 16.36	1 51.4	26 43.50	+20.14	-0 21.58	+10.17	-2.05	-26.60	23 1 58.02	51 54 27.6
23 2 28.2	9.6	3 40.52	3 19.0	38 33.70	+17.78	-0 21.58	+ 8.83	-2.07	-26.50	23 3 22.21	50 42 33.8
23 4 1.2	9.0	5 10.28	4 44.1	21 29.55	+20.59	-0 21.59	+11.37	-2.08	-26.75	23 4 51.91	52 59 43.1
23 5 23.5	9.1	6 37.52	6 6.8	19 38.00	+25.21	-0 21.58	+ 9.01	-2.10	-26.55	23 6 19.22	51 1 37.2
23 7 55.2	9.0	9 7.94	8 49.0	31 2.65	+15.59	-0 21.58	+ 9.08	-2.13	-26.65	23 8 49.63	50 50 3.0
23 9 19.9	9.0	10 31.04	10 10.9	4 20.65	+16.06	-0 21.58	+10.55	-2.14	-26.70	23 10 12.72	52 16 47.0
23 10 45.9	8.6	11 58.70	11 31.9	12 30.75	+22.42	-0 21.58	+ 8.19	-2.17	-26.45	23 11 40.42	50 8 41.2
23 13 0.6	9.0	14 13.80	13 54.8	21 1.95	+15.61	-0 21.58	+ 9.25	-2.19	-26.55	23 13 55.51	51 0 4.2
23 13 53.8	9.2	15 7.88	14 57.0	31 55.05	+ 8.99	-0 21.58	+ 9.10	-2.20	-26.55	23 14 49.60	50 49 4.4
23 14 59.4	8.7	16 12.96	15 50.5	45 12.20	+18.65	-0 21.58	+ 8.82	-2.21	-26.55	23 15 54.69	50 35 56.6
23 16 3.9	7.0	17 17.00	16 51.0	59 27.95	+21.65	-0 21.58	+ 8.39	-2.23	-26.50	23 16 58.73	50 21 43.5
23 17 48.1	9.4	19 1.44	18 35.6	38 25.25	+20.41	-0 21.58	+11.00	-2.24	-26.75	23 18 43.13	52 42 47.4
23 18 53.9	9.4	20 8.54	20 29.5	21 44.75	-16.88	-0 21.58	+10.30	-2.26	-26.65	23 19 50.25	51 58 50.1
23 19 50.8	8.8	21 4.40	20 52.2	35 41.05	+ 9.64	-0 21.58	+11.28	-2.27	-26.75	23 20 46.09	52 45 21.2
23 21 43.8	9.3	22 58.14	22 33.6	58 22.35	+20.40	-0 21.58	+ 8.31	-2.29	-26.50	23 22 39.89	50 22 48.0
23 22 40.8	8.3	23 55.90	23 32.6	21 22.40	+19.15	-0 21.58	+ 9.20	-2.30	-26.55	23 23 37.64	50 59 47.5
23 24 44.5	9.3	25 59.38	25 42.5	56 51.60	+14.06	-0 21.58	+ 8.61	-2.32	-26.50	23 25 41.14	50 24 12.8
23 25 56.3	9.0	27 11.42	26 41.6	9 34.35	+24.38	-0 21.58	+ 9.21	-2.34	-26.60	23 26 53.16	51 11 40.9
23 27 8.4	9.3	28 23.86	27 58.5	27 31.00	+20.92	-0 21.58	+ 9.00	-2.35	-26.55	23 28 5.61	50 53 40.6
23 28 45.9	7.0	30 1.34	29 32.2	46 54.25	+24.13	-0 21.58	+ 8.64	-2.37	-26.55	23 29 43.10	50 34 20.3
23 30 24.9	9.0	31 40.40	31 13.8	4 56.20	+22.19	-0 21.58	+ 8.39	-2.38	-26.50	23 31 22.18	50 16 16.2
23 32 3.0	8.0	33 17.88	32 52.1	46 59.00	+20.94	-0 21.58	+ 9.78	-2.41	-26.60	23 32 59.64	51 34 13.5
23 33 22.4	9.0	34 38.66	34 14.5	18 44.60	+19.86	-0 21.58	+ 9.16	-2.42	-26.55	23 34 20.43	51 2 26.3
23 34 11.7	8.0	35 27.34	.....	.....	.....	-0 21.58	.....	-2.43	.....	23 35 9.12	.....
23 34 48.0	9.0	36 4.32	35 41.2	20 50.55	+18.98	-0 21.58	+ 9.21	-2.43	-26.50	23 35 46.10	51 0 19.6
23 35 37.8	8.0	36 53.04	36 38.1	37 0.65	+12.31	-0 21.58	+ 8.99	-2.44	-26.50	23 36 34.83	50 44 2.6
ZONE 259, NOVEMBER 5, 1873.											
22 33 8.9	9.0	34 16.20	33 56.8	50 23.20	+16.11	-0 21.41	+ 8.95	-1.72	-26.20	22 33 58.02	50 30 42.3
22 34 5.1	8.8	35 12.40	34 49.6	24 7.20	+18.76	-0 21.41	+ 9.30	-1.73	-26.30	22 34 54.21	50 57 1.3
22 35 24.0	8.3	36 31.54	36 8.8	4 33.20	+18.94	-0 21.41	+ 8.52	-1.76	-26.20	22 36 13.36	50 16 34.9
22 36 41.6	8.7	37 49.92	37 27.4	57 45.60	+18.73	-0 21.41	+ 8.72	-1.76	-26.25	22 37 31.76	50 23 22.5
22 38 12.6	7.8	39 21.32	38 56.7	33 42.15	+20.30	-0 21.41	+ 9.10	-1.77	-26.35	22 39 3.15	50 47 27.9
22 39 28.4	7.9	40 36.94	40 17.2	41 8.00	+16.30	-0 21.41	+ 9.10	-1.79	-26.35	22 40 18.77	50 39 58.3
22 41 3.0	9.0	42 11.94	41 38.8	53 5.00	+26.92	-0 21.41	+ 9.73	-1.80	-26.45	22 41 53.75	51 28 12.4
22 42 42.6	9.1	43 52.12	43 20.2	5 55.90	+26.63	-0 21.41	+ 8.47	-1.83	-26.35	22 43 33.97	50 15 20.1
22 43 53.2	8.4	45 2.96	44 32.6	20 27.60	+25.08	-0 21.41	+ 9.34	-1.84	-26.45	22 44 44.79	51 0 47.7
22 45 37.3	6.9	46 46.04	46 15.3	59 19.00	+24.48	-0 21.40	+10.77	-1.84	-26.65	22 46 27.85	52 21 57.0
22 47 22.0	9.3	48 30.48	48 1.7	22 47.70	+23.16	-0 21.41	+10.41	-1.86	-26.60	22 48 12.30	51 58 26.8
22 48 39.6	8.6	49 50.46	49 17.9	1 34.85	+27.17	-0 21.41	+ 8.52	-1.90	-26.45	22 49 32.32	50 19 42.0
22 49 48.6	9.0	50 59.14	50 28.1	33 53.90	+25.03	-0 21.41	+10.13	-1.90	-26.65	22 50 40.96	51 47 22.2
22 52 17.0	8.2	53 26.74	52 59.8	24 52.15	+22.13	-0 21.41	+ 9.20	-1.93	-26.55	22 53 8.59	50 56 20.4
22 54 21.4	8.8	55 32.42	55 5.7	8 33.10	+21.84	-0 21.41	+ 9.53	-1.95	-26.60	22 55 14.28	51 12 39.5
22 55 31.9	8.8	56 41.80	56 12.6	39 59.50	+24.15	-0 21.41	+ 9.06	-1.97	-26.55	22 56 23.67	50 41 15.1
22 56 39.1	8.8	57 48.94	57 23.7	44 43.00	+20.88	-0 21.41	+ 8.86	-1.98	-26.55	22 57 30.82	50 36 28.2
ZONE 260, NOVEMBER 6, 1873.											
22 31 27.0	5.6	32 32.64	32 6.6	27 8.20	+21.40	-0 21.30	+ 9.28	-1.67	-26.35	22 32 14.58	50 54 2.1
22 33 8.9	9.2	34 16.02	33 54.1	50 24.90	+18.18	-0 21.30	+ 8.94	-1.69	-26.30	22 33 57.98	50 30 42.0
22 34 5.1	8.5	35 12.26	34 46.1	24 8.90	+21.55	-0 21.30	+ 9.27	-1.70	-26.40	22 34 54.21	50 57 1.7

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
22 35 24.0	8.3	36 31.34	36 6.1	4 33.70	+21.03	-0 21.30	+ 8.52	-1.72	-26.30	22 36 13.31	50 16 35.8
22 36 41.6	8.8	37 49.74	37 27.2	57 46.35	+18.73	-0 21.30	+ 8.75	-1.73	-26.35	22 37 31.72	50 23 21.1
22 38 12.6	7.2	39 21.24	38 48.8	33 47.85	+26.74	-0 21.30	+ 9.00	-1.75	-26.45	22 39 3.20	50 47 27.8
22 39 28.4	7.8	40 36.72	40 15.8	41 8.45	+17.30	-0 21.30	+ 9.12	-1.77	-26.50	22 40 18.68	50 39 58.1
22 41 3.0	9.0	42 11.90	41 46.8	52 57.85	+20.41	-0 21.30	+ 9.88	-1.78	-26.60	22 41 53.84	51 28 12.4
22 42 42.6	9.2	43 52.00	43 30.5	5 48.35	+17.95	-0 21.30	+ 8.67	-1.81	-26.50	22 43 33.98	50 15 18.4
22 43 53.2	8.5	45 2.68	44 40.8	20 21.95	+17.99	-0 21.31	+ 9.48	-1.71	-26.60	22 44 44.74	51 0 45.7
22 45 37.3	6.8	46 45.90	46 21.6	59 14.60	+19.38	-0 21.31	+10.89	-1.82	-26.75	22 46 27.82	52 21 55.7
22 47 22.0	9.2	48 30.32	48 7.4	22 42.65	+18.33	-0 21.31	+10.51	-1.85	-26.75	22 48 12.25	51 58 26.4
22 48 39.6	8.8	49 50.36	49 25.6	1 27.75	+20.67	-0 21.31	+ 8.68	-1.88	-26.60	22 49 32.34	50 19 42.0
22 49 48.6	9.1	50 58.96	50 41.6	33 44.30	+14.05	-0 21.31	+10.34	-1.87	-26.75	22 50 40.91	51 47 20.4
22 52 17.0	8.0	53 26.64	53 5.6	24 47.10	+17.28	-0 21.31	+ 9.32	-1.91	-26.70	22 53 8.61	50 56 20.0
22 54 21.4	8.8	55 32.34	55 9.7	8 30.45	+18.48	-0 21.31	+ 9.64	-1.93	-26.75	22 55 14.32	51 12 38.2
22 55 31.9	8.8	56 41.82	56 21.9	39 53.40	+16.46	-0 21.31	+ 9.04	-1.95	-26.70	22 56 23.81	50 41 12.7
22 56 39.1	8.8	57 48.68	57 28.6	44 39.50	+16.65	-0 21.31	+ 8.96	-1.96	-26.70	22 57 30.68	50 36 26.8
22 58 23.6	8.8	59 34.38	59 17.4	19 3.20	+13.96	-0 21.31	+ 9.47	-1.98	-26.80	22 59 16.37	51 2 0.9
23 0 5.7	8.0	1 15.76	0 55.7	56 59.50	+16.73	-0 21.31	+ 8.82	-2.01	-26.75	23 0 57.76	50 24 6.8
23 1 5.2	9.3	2 15.90	1 52.5	26 43.55	+18.85	-0 21.31	+10.48	-2.01	-26.90	23 1 57.87	51 54 26.5
23 2 28.2	9.5	3 40.24	3 20.2	38 33.35	+16.53	-0 21.31	+ 9.10	-2.03	-26.80	23 3 22.24	50 42 33.1
23 4 1.2	8.8	5 10.02	4 48.2	21 28.75	+17.13	-0 21.32	+11.73	-2.04	-27.05	23 4 51.96	52 59 40.8
23 5 23.5	9.1	6 37.08	6 17.8	19 29.70	+15.85	-0 21.31	+ 9.42	-2.06	-26.85	23 6 19.09	51 1 36.5
23 7 55.2	8.8	9 7.48	8 43.2	31 6.35	+19.58	-0 21.31	+ 9.31	-2.09	-26.85	23 8 49.48	50 50 3.6
23 9 19.9	9.0	10 30.74	10 10.9	4 18.10	+15.82	-0 21.31	+10.84	-2.10	-27.00	23 10 12.73	52 16 49.5
23 10 45.9	8.0	11 58.50	11 32.8	12 30.45	+21.50	-0 21.31	+ 8.45	-2.13	-26.80	23 11 40.53	50 8 40.7
23 13 0.6	9.0	14 13.62	13 58.8	20 57.55	+12.16	-0 21.32	+ 9.55	-2.15	-26.90	23 13 55.63	51 0 5.3
23 13 53.8	8.9	15 7.70	14 55.5	31 57.00	+10.06	-0 21.32	+ 9.35	-2.16	-26.85	23 14 49.72	50 49 3.7
23 14 59.4	8.6	16 12.82	15 52.7	45 11.55	+16.66	-0 21.32	+ 9.10	-2.17	-26.85	23 15 54.85	50 35 55.5
23 16 3.9	7.7	17 16.78	16 55.6	59 23.20	+17.66	-0 21.32	+ 8.70	-2.19	-26.85	23 16 58.81	50 21 44.5
23 17 48.1	9.0	19 0.98	18 38.3	38 23.10	+17.96	-0 21.32	+11.35	-2.20	-27.05	23 18 42.97	52 42 47.4
23 18 53.9	9.4	20 8.30	19 47.7	22 19.35	+16.57	-0 21.32	+10.56	-2.22	-27.00	23 19 50.31	51 58 49.0
23 19 50.8	8.8	21 4.26	21 2.9	35 34.20	+ 1.11	-0 21.32	+11.63	-2.23	-27.10	23 20 46.25	52 45 19.7
23 21 43.8	9.0	22 57.96	22 35.5	58 20.45	+18.73	-0 21.32	+ 8.76	-2.25	-26.85	23 22 40.01	50 22 48.5
23 22 40.8	8.0	23 55.68	23 31.6	21 22.85	+19.80	-0 21.32	+ 9.47	-2.26	-26.90	23 23 37.72	50 59 47.9
23 23 44.1	9.3	24 59.22	24 30.3	0 19.70	+24.08	-0 21.32	+ 9.84	-2.28	-26.95	23 24 41.27	50 20 55.7
23 24 44.5	9.3	25 59.24	25 39.3	56 55.40	+16.56	-0 21.32	+ 8.85	-2.28	-26.80	23 25 41.30	50 24 11.6
23 25 56.3	8.7	27 11.08	26 50.2	9 27.20	+17.10	-0 21.32	+ 9.63	-2.30	-26.90	23 26 53.12	51 11 41.1
23 27 8.4	8.9	28 23.60	28 6.2	27 27.20	+14.33	-0 21.32	+ 9.40	-2.31	-26.90	23 28 5.65	50 53 38.1
23 28 45.9	6.0	30 1.10	29 32.8	46 54.45	+23.46	-0 21.32	+ 8.92	-2.33	-26.85	23 29 43.16	50 34 19.6
23 30 24.9	9.0	31 40.16	31 15.0	4 56.65	+21.03	-0 21.32	+ 8.70	-2.35	-26.80	23 31 22.23	50 16 14.8
23 32 3.0	8.2	33 17.66	32 58.9	46 54.40	+15.25	-0 21.32	+10.16	-2.37	-26.95	23 32 59.72	51 34 12.7
23 33 22.4	9.1	34 38.52	34 25.3	18 36.55	+10.83	-0 21.32	+ 9.55	-2.38	-26.85	23 34 20.59	51 2 25.6
23 34 11.7	8.0	35 27.18	.....	.....	.....	-0 21.32	.....	-2.39	.....	23 35 9.26	.....
23 34 48.0	9.1	36 4.22	35 55.9	20 37.55	+ 6.82	-0 21.32	+ 9.63	-2.40	-26.85	23 35 46.29	51 0 20.7
ZONE 261, NOVEMBER 10, 1873.											
22 44 29.0	8.5	45 37.18	45 27.7	53 40.35	+ 7.90	-0 20.88	+ 8.93	-1.73	-27.00	22 45 19.68	50 27 16.1
22 46 0.6	9.0	47 9.54	46 47.1	19 35.10	+18.39	-0 20.88	+ 9.43	-1.75	-27.10	22 46 52.02	51 1 32.4
22 47 45.8	9.5	48 54.52	48 37.8	6 59.65	+13.95	-0 20.88	+ 8.67	-1.78	-27.00	22 48 37.02	50 14 2.8
22 48 39.6	8.8	49 49.74	49 31.3	1 20.80	+15.34	-0 20.88	+ 8.77	-1.79	-27.05	22 49 32.24	50 19 43.1
22 49 48.6	9.0	50 58.44	50 39.2	33 43.55	+15.50	-0 20.88	+10.35	-1.78	-27.25	22 50 40.91	51 47 22.0
22 51 12.4	8.6	52 21.92	52 0.1	21 20.05	+17.91	-0 20.88	+ 9.45	-1.81	-27.20	22 52 4.41	50 59 47.1
22 52 39.4	8.3	53 48.84	53 33.3	35 57.65	+12.80	-0 20.88	+ 9.26	-1.83	-27.20	22 53 31.34	50 45 4.3
22 54 22.4	8.0	55 31.66	55 2.3	0 33.95	+24.50	-0 20.87	+ 8.66	-1.85	-27.15	22 55 14.18	50 20 39.2

R. A. 1855.0 According to B. D.			Obs. Magn.	Mean of R. A. Wires.		Mean of Dec. Wires.		Mean of Circle Readings.		Red to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.			Mean Dec. 1875.0.					
											R. A.		Dec.		R. A.		Dec.						
h	m	s		m	s	m	s	'	"	"	m	s	"	s	"	h	m	s	°	'	"		
22	54	52.9	9.0	56	2.24	55	58.1	30	26.90	+	3.23	-0	20.87	+	11.69	-1.83	-27.45	22	55	44.71	52	50	27.8
22	55	52.6	9.1	57	3.48	56	52.9	22	37.25	+	8.71	-0	20.88	+	9.51	-1.86	-27.25	22	56	45.98	50	58	21.0
22	57	1.9	9.1	58	11.90	57	58.0	12	40.60	+	11.39	-0	20.88	+	9.69	-1.88	-27.30	22	57	54.40	51	8	20.5
22	58	23.6	8.8	59	33.88	59	19.2	18	58.85	+	12.07	-0	20.88	+	9.53	-1.89	-27.30	22	59	16.39	51	2	2.8
23	0	7.4	8.6	1	17.78	0	48.9	35	36.65	+	23.79	-0	20.88	+	9.13	-1.92	-27.30	23	1	0.29	50	45	36.4
23	1	48.6	8.0	2	59.00	2	39.3	49	53.00	+	16.35	-0	20.88	+	8.90	-1.94	-27.30	23	2	41.52	50	31	12.5
23	2	56.0	8.8	4	6.96	3	35.9	17	59.50	+	25.53	-0	20.88	+	9.37	-1.95	-27.40	23	3	49.47	51	3	15.6
23	4	40.4	8.3	5	51.46	5	26.5	27	25.55	+	20.59	-0	20.88	+	9.28	-1.97	-27.40	23	5	33.98	50	53	44.6
23	5	50.3	7.0	7	0.61	6	41.0	48	1.60	+	15.91	-0	20.88	+	10.09	-1.98	-27.45	23	6	43.12	51	33	4.6
23	6	44.2	8.5	7	55.12	7	27.4	54	45.95	+	22.04	-0	20.87	+	10.96	-1.98	-27.60	23	7	37.63	52	26	27.2
23	7	42.8	8.9	8	51.78	8	35.1	35	58.50	+	13.19	-0	20.88	+	11.52	-1.99	-27.65	23	8	34.27	52	45	6.3
23	9	43.4	8.8	10	54.74	10	32.7	27	30.70	+	17.33	-0	20.88	+	11.58	-2.02	-27.60	23	10	37.23	52	53	38.5
23	11	4.3	9.1	12	16.36	11	57.7	11	36.55	+	15.64	-0	20.88	+	8.58	-2.05	-27.35	23	11	58.91	50	9	28.2
23	13	0.6	9.0	14	13.06	13	56.3	20	59.45	+	13.81	-0	20.88	+	9.54	-2.07	-27.45	23	13	55.59	51	0	4.4
23	16	35.7	9.0	17	48.60	17	32.9	9	8.25	+	13.12	-0	20.88	+	8.62	-2.12	-27.35	23	17	31.15	50	11	54.2
23	18	16.6	9.2	19	29.52	19	5.1	2	30.40	+	20.51	-0	20.87	+	8.67	-2.13	-27.45	23	19	12.09	50	18	39.5
23	19	16.1	8.2	20	28.68	20	0.7	51	45.25	+	22.26	-0	20.87	+	11.08	-2.14	-27.70	23	20	11.21	52	29	28.6
23	19	37.0	7.0	20	49.02	21	11.0	51	45.25	-	17.49	-0	20.87	+	11.16	-2.14	-27.70	23	20	31.56	52	28	48.9
23	21	51.7	9.1	23	6.00	22	39.5	3	14.55	+	22.11	-0	20.88	+	8.64	-2.18	-27.45	23	22	48.56	50	17	57.0
23	23	55.6	9.1	25	10.26	24	47.8	55	33.85	+	18.71	-0	20.88	+	8.86	-2.20	-27.45	23	24	52.83	50	25	34.6
23	25	5.8	8.7	26	18.76	25	58.8	30	30.70	+	16.13	-0	20.88	+	10.47	-2.21	-27.60	23	26	1.31	51	50	36.8
23	26	30.2	8.9	27	44.10	27	25.5	12	17.75	+	15.56	-0	20.88	+	8.55	-2.23	-27.40	23	27	26.68	50	8	47.3
23	27	25.4	7.8	28	39.74	28	27.0	25	39.45	+	10.45	-0	20.88	+	9.49	-2.24	-27.50	23	28	22.31	50	55	21.5
23	28	31.2	9.1	29	45.04	29	30.4	33	46.00	+	12.05	-0	20.88	+	9.26	-2.25	-27.50	23	29	27.62	50	47	16.3
23	28	52.5	9.0	30	7.24	30	4.4	33	46.00	+	2.31	-0	20.88	+	9.32	-2.25	-27.50	23	29	49.81	50	47	6.6
23	29	58.6	7.5	31	13.18	30	46.1	45	35.85	+	21.98	-0	20.80	+	10.10	-2.27	-27.55	23	30	55.83	51	35	37.1
23	30	2.9	9.2	31	17.56	30	45.1	45	45.85	+	36.36	-0	20.87	+	10.01	-2.27	-27.55	23	31	0.14	51	35	41.4
23	32	3.0	8.0	33	16.98	32	51.1	46	58.90	+	21.02	-0	20.89	+	10.07	-2.29	-27.55	23	32	59.55	51	34	13.1
23	33	3.2	9.1	34	17.94	33	58.9	29	13.70	+	15.66	-0	20.89	+	9.32	-2.31	-27.45	23	34	0.51	50	51	52.4
23	35	5.6	9.2	36	21.36	36	13.0	17	11.15	+	6.89	-0	20.89	+	9.64	-2.33	-27.45	23	36	3.94	51	3	46.5
23	36	34.0	9.0	37	49.78	37	31.6	46	42.35	+	15.09	-0	20.89	+	9.05	-2.35	-27.40	23	37	32.37	50	34	23.0
23	38	9.2	8.9	39	25.54	39	5.5	11	6.70	+	16.73	-0	20.89	+	8.60	-2.37	-27.40	23	39	8.13	50	9	59.8
23	38	59.7	9.3	40	16.36	40	2.9	46	17.10	+	11.19	-0	20.89	+	9.09	-2.38	-27.40	23	39	58.95	50	34	44.4
23	39	48.5	7.0	41	3.94	40	54.3	48	52.60	+	7.97	-0	20.89	+	9.03	-2.38	-27.45	23	40	46.54	50	32	5.6
23	40	50.0	8.8	42	5.80	42	1.8	12	22.25	+	3.28	-0	20.89	+	9.74	-2.40	-27.50	23	41	48.39	51	8	31.9
23	41	44.5	9.0	43	0.66	42	47.0	13	11.95	+	11.23	-0	20.89	+	9.67	-2.41	-27.50	23	42	43.25	51	7	50.1
23	43	46.1	9.2	45	1.90	44	31.2	38	27.70	+	25.38	-0	20.89	+	9.00	-2.43	-27.40	23	44	44.51	50	42	48.0
23	43	46.1	7.9	45	3.24	45	16.5	38	27.70	-	11.00	-0	20.86	+	9.20	-2.43	-27.40	23	44	45.88	50	42	11.8
ZONE 262, NOVEMBER 18, 1873.																							
23	39	16.2	8.6	40	30.40	40	13.6	25	54.50	+	13.22	-0	19.22	+	11.37	-2.22	-28.95	23	40	14.80	52	55	9.9
23	40	23.0	8.9	41	36.78	41	16.9	48	54.50	+	15.80	-0	19.22	+	10.98	-2.24	-28.85	23	41	21.18	52	32	12.2
23	41	38.0	8.9	42	52.52	42	22.0	55	11.95	+	24.28	-0	19.22	+	10.67	-2.25	-28.85	23	42	36.93	52	26	2.9
23	42	59.4	9.1	44	14.60	44	1.1	9	38.55	+	10.80	-0	19.22	+	10.66	-2.27	-28.85	23	43	59.01	52	11	22.8
23	45	59.7	8.9	47	15.38	47	6.3	57	16.35	+	7.25	-0	19.22	+	10.87	-2.31	-28.85	23	46	59.80	52	23	41.7
23	47	32.4	7.8	48	48.24	48	31.5	32	54.65	+	13.17	-0	19.22	+	11.27	-2.34	-28.90	23	48	32.65	52	48	9.7
23	48	58.0	8.5	50	13.76	49	50.1	51	40.95	+	18.84	-0	19.22	+	10.85	-2.35	-28.85	23	49	58.18	52	29	28.6
23	49	49.0	8.4	51	4.56	50	42.5	18	9.15	+	17.35	-0	19.22	+	11.48	-2.36	-28.95	23	50	48.98	53	2	59.6
23	51	22.0	7.7	52	37.38	52	15.4	39	39.40	+	17.41	-0	19.22	+	11.07	-2.38	-28.90	23	52	21.81	52	41	29.0
23	51	51.8	8.8	53	7.80	53	0.1	33	30.90	+	6.08	-0	19.21	+	11.32	-2.39	-28.90	23	52	52.23	52	47	26.4
23	53	32.0	8.9	54	48.00	54	27.6	47	0.80	+	16.19	-0	19.22	+	10.94	-2.41	-28.85	23	54	32.43	52	34	6.4
23	54	56.3	8.4	56	11.72	55	51.5	27	38.30	+	16.28	-0	19.22	+	10.28	-2.43	-28.75	23	55	56.16	51	53	28.4
23	56	3.3	8.6	57	19.36	57	1.7	44	4.55	+	14.03	-0	19.22	+	11.07	-2.44	-28.90	23	57	3.80	52	37	0.5

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	° "	"	m s	"	s	"	h m s	° ' "
23 57 52.7	9.4	59 9.84	58 39.0	12 14.95	+24.68	-0 19.23	+10.37	-2.46	-28.80	23 58 54.28	52 9 0.2
23 59 32.0	9.0	0 48.46	0 23.2	53 17.70	+20.13	-0 19.22	+10.80	-2.49	-28.80	0 0 32.90	52 27 53.3
0 0 58.3	7.7	2 15.70	1 50.4	42 46.95	+20.50	-0 19.23	+ 9.91	-2.50	-28.70	0 2 0.14	51 38 23.6
0 2 12.8	7.5	3 29.52	4 5.3	0 20.40	-29.19	-0 19.23	+ 9.36	-2.52	-28.60	0 3 13.96	51 20 0.0
0 2 19.6	8.9	3 36.58	3 11.4	0 20.40	+20.55	-0 19.23	+ 9.54	-2.52	-28.60	0 3 21.02	51 20 50.0
0 3 51.0	9.1	5 8.90	4 53.2	58 9.30	+12.80	-0 19.23	+ 9.73	-2.54	-28.65	0 4 53.34	51 22 53.4
0 5 14.3	8.2	6 31.74	6 11.7	6 35.00	+16.35	-0 19.23	+ 9.54	-2.55	-28.60	0 6 16.20	51 14 31.2
0 6 8.2	8.3	7 26.14	7 9.2	23 15.25	+13.60	-0 19.22	+10.40	-2.57	-28.70	0 7 10.60	51 57 48.9
0 7 26.1	7.8	8 44.30	8 19.1	24 30.20	+20.28	-0 19.22	+10.30	-2.58	-28.65	0 8 28.77	51 56 40.6
0 9 18.6	8.7	10 37.66	10 9.7	27 19.15	+22.56	-0 19.22	+10.15	-2.61	-28.65	0 10 22.12	51 53 53.7
0 10 3.4	8.7	11 21.90	11 2.6	5 50.20	+15.77	-0 19.23	+ 9.56	-2.61	-28.55	0 11 6.36	51 15 15.4
0 11 13.7	6.8	12 33.34	12 8.9	52 25.45	+19.84	-0 19.23	+ 9.76	-2.63	-28.55	0 12 17.80	51 28 44.4
0 12 18.4	8.8	13 37.40	13 16.1	9 18.25	+17.43	-0 19.23	+ 9.49	-2.64	-28.50	0 13 21.87	51 11 49.0
0 14 41.3	8.0	16 0.66	15 40.5	49 34.10	+16.37	-0 19.23	+ 9.89	-2.67	-28.50	0 15 45.13	51 31 32.4
0 15 34.8	8.6	16 54.42	16 30.1	20 4.20	+19.53	-0 19.22	+10.32	-2.69	-28.55	0 16 38.90	52 1 5.9
0 16 47.9	9.5	18 7.84	17 37.9	25 49.80	+23.70	-0 19.22	+ 9.10	-2.69	-28.40	0 17 52.34	51 55 23.4
0 17 50.6	9.1	19 9.94	18 38.8	2 18.00	+25.38	-0 19.23	+ 9.49	-2.71	-28.45	0 18 54.42	51 18 57.2
0 18 42.4	8.7	20 2.78	19 36.4	35 58.15	+21.33	-0 19.23	+10.04	-2.72	-28.50	0 19 47.27	51 45 13.4
0 19 51.6	9.1	21 10.94	20 44.1	34 50.83	+22.13	-0 19.23	+ 8.94	-2.73	-28.40	0 20 55.42	50 46 20.8
ZONE 263, NOVEMBER 19, 1873.											
23 31 2.7	7.8	32 14.72	31 39.9	13 29.35	+27.90	-0 19.24	+10.44	-2.09	-28.90	23 31 59.11	52 7 47.9
23 31 2.7	9.1	32 16.02	32 1.3	13 29.35	+11.78	-0 19.24	+10.70	-2.09	-28.90	23 32 0.41	52 7 32.0
23 34 20.0	8.8	35 32.22	35 3.8	18 32.60	+22.29	-0 19.24	+11.53	-2.13	-29.00	23 35 16.61	53 2 40.1
23 35 43.9	9.4	36 57.58	36 28.3	17 19.70	+22.99	-0 19.23	+11.51	-2.15	-29.05	23 36 41.98	53 3 53.6
23 36 35.8	9.0	37 49.42	37 37.6	3 45.00	+ 9.42	-0 19.23	+10.93	-2.16	-28.95	23 37 33.84	52 17 14.3
23 39 16.2	8.8	40 30.30	40 4.5	26 1.90	+20.31	-0 19.23	+11.40	-2.20	-29.05	23 40 14.71	52 55 8.7
23 40 23.0	9.1	41 36.62	41 10.3	48 59.40	+20.88	-0 19.22	+11.04	-2.22	-29.00	23 41 21.04	52 32 11.5
23 41 38.0	9.0	42 52.50	42 27.7	55 8.45	+19.74	-0 19.22	+10.87	-2.23	-29.00	23 42 36.93	52 26 1.1
23 43 3.4	8.9	44 17.42	43 53.8	8 31.05	+18.88	-0 19.23	+10.68	-2.25	-28.95	23 44 1.84	52 12 37.6
23 44 44.5	9.0	45 57.48	45 43.0	50 18.00	+11.52	-0 19.22	+11.09	-2.27	-29.00	23 45 41.92	52 30 43.6
23 45 59.7	8.8	47 15.24	47 0.2	57 18.15	+11.95	-0 19.22	+10.95	-2.29	-29.00	23 46 59.68	52 23 43.8
23 47 32.4	8.3	48 48.12	48 17.5	33 5.60	+24.16	-0 19.22	+11.24	-2.31	-29.05	23 48 32.56	52 48 8.8
23 48 58.0	8.8	50 13.68	49 50.2	51 40.85	+18.68	-0 19.22	+10.98	-2.33	-29.00	23 49 58.12	52 29 27.8
23 49 49.0	8.8	51 4.38	50 51.3	18 2.55	+10.28	-0 19.23	+11.71	-2.34	-29.10	23 50 48.81	53 2 58.4
23 51 22.0	7.7	52 37.34	52 14.9	39 38.60	+17.72	-0 19.22	+11.26	-2.36	-29.05	23 52 21.79	52 41 29.4
23 51 51.8	9.0	53 7.60	52 59.4	33 30.55	+ 6.47	-0 19.22	+11.46	-2.37	-29.05	23 52 52.04	52 47 26.4
23 53 32.0	9.0	54 47.78	54 19.9	47 6.45	+22.15	-0 19.22	+11.02	-2.39	-29.00	23 54 32.23	52 34 5.8
23 54 56.3	8.7	56 11.74	55 45.2	27 43.55	+21.35	-0 19.23	+10.32	-2.41	-28.90	23 55 56.19	51 53 27.3
23 56 3.3	8.2	57 19.32	56 56.0	44 7.40	+18.47	-0 19.22	+11.16	-2.42	-29.00	23 57 3.78	52 37 1.3
23 57 52.7	9.5	59 9.64	59 15.4	11 46.25	- 4.65	-0 19.22	+10.73	-2.44	-28.90	23 58 54.11	52 8 59.0
23 59 32.0	9.0	0 48.28	0 21.1	53 17.80	+21.64	-0 19.22	+10.91	-2.47	-29.00	0 0 32.74	52 27 53.8
0 0 58.3	8.0	2 15.60	1 46.1	42 50.20	+23.90	-0 19.23	+ 9.98	-2.48	-28.80	0 2 0.06	51 38 23.0
0 2 12.8	7.2	3 29.32	3 54.0	0 29.20	-20.14	-0 19.23	+ 9.65	-2.50	-28.80	0 3 13.78	51 19 59.6
0 2 19.6	9.1	3 36.56	2 59.3	0 29.20	+30.42	-0 19.23	+ 9.44	-2.50	-28.80	0 3 21.02	51 20 49.9
0 5 14.3	8.9	6 31.86	6 0.8	6 43.40	+25.42	-0 19.23	+ 9.52	-2.53	-28.75	0 6 16.34	51 14 30.9
0 6 8.2	8.8	7 26.14	7 4.3	23 20.08	+17.54	-0 19.23	+10.52	-2.55	-28.85	0 7 10.61	51 57 47.2
0 7 26.1	8.0	8 44.32	8 18.6	24 30.40	+20.68	-0 19.23	+10.45	-2.57	-28.80	0 8 28.79	51 56 40.0
0 9 18.6	8.8	10 37.64	10 18.4	27 12.60	+15.47	-0 19.23	+10.42	-2.59	-28.80	0 10 22.11	51 53 52.5
0 10 3.4	8.7	11 21.84	11 12.7	5 41.85	+ 7.42	-0 19.23	+ 9.75	-2.59	-28.70	0 11 6.32	51 15 14.6
0 11 13.7	7.2	12 33.32	12 11.3	52 22.65	+17.89	-0 19.23	+ 9.92	-2.61	-28.70	0 12 17.80	51 28 44.5
0 12 18.4	8.8	13 37.42	13 16.2	9 18.40	+17.35	-0 19.23	+ 9.65	-2.62	-28.65	0 13 21.91	51 11 48.0
0 14 41.3	8.0	16 0.64	15 35.6	49 37.45	+20.31	-0 19.23	+ 9.99	-2.65	-28.65	0 15 45.13	51 31 32.2

R. A. 1855.o. According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.o.	Mean Dec. 1875.o.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
0 15 34.8	8.2	16 54.34	16 25.5	20 6.90	+23.14	-0 19.23	+10.39	-2.67	-28.70	0 16 38.83	52 1 5.9
0 16 47.9	9.5	18 7.68	17 52.3	25 36.85	+12.67	-0 19.23	+ 9.35	-2.67	-28.55	0 17 52.19	51 55 24.6
0 17 50.6	9.1	19 9.76	18 58.3	2 0.60	+ 9.39	-0 19.23	+ 9.85	-2.69	-28.60	0 18 54.26	51 18 58.0
0 18 42.4	8.4	20 2.78	19 49.4	35 46.55	+10.83	-0 19.23	+10.30	-2.71	-28.65	0 19 47.28	51 45 13.9
0 19 51.6	9.1	21 10.98	21 5.4	34 32.45	+ 4.62	-0 19.23	+ 9.31	-2.71	-28.50	0 20 55.48	50 46 20.9
ZONE 264, DECEMBER 7, 1873.											
22 44 29.0	8.8	45 24.84	45 0.3	53 52.90	+20.36	-0 9.00	+ 9.48	-1.07	-27.95	22 45 19.88	50 27 18.4
22 46 0.6	9.1	46 56.94	46 31.1	19 40.92	+21.19	-0 8.98	+10.19	-1.06	-28.15	22 46 52.01	51 1 31.8
22 47 45.8	9.6	48 42.20	48 13.5	7 10.65	+23.97	-0 8.99	+ 8.99	-1.12	-28.15	22 48 37.25	50 14 3.7
22 48 39.6	8.6	49 37.30	49 23.6	1 18.60	+11.42	-0 8.99	+ 9.18	-1.13	-28.20	22 49 32.35	50 19 43.4
22 49 48.6	9.0	50 45.92	50 18.9	33 50.20	+21.80	-0 8.98	+10.99	-1.09	-28.55	22 50 40.98	51 47 23.7
22 51 12.4	8.5	52 9.36	51 42.7	21 25.55	+21.94	-0 8.98	+ 9.82	-1.14	-28.45	22 52 4.42	50 59 47.5
22 52 39.4	8.2	53 36.50	53 11.4	36 9.00	+20.73	-0 8.99	+ 9.55	-1.17	-28.45	22 53 31.55	50 45 2.6
22 54 22.4	8.0	55 19.16	54 55.4	0 30.85	+19.83	-0 8.99	+ 8.92	-1.20	-28.40	22 55 14.21	50 20 39.4
22 54 52.9	8.8	55 49.58	55 40.2	30 32.55	+ 7.41	-0 8.97	+12.01	-1.13	-29.00	22 55 44.65	52 50 27.8
22 55 52.6	9.1	56 50.94	56 31.6	22 44.20	+15.87	-0 8.98	+10.04	-1.20	-28.65	22 56 46.00	52 58 23.0
22 56 38.2	8.3	57 35.48	57 54.9	14 3.00	-15.90	-0 8.98	+10.30	-1.21	-28.75	22 57 30.54	51 6 32.6
22 58 23.6	8.8	59 21.48	58 57.5	19 7.80	+19.70	-0 8.98	+10.18	-1.24	-28.80	22 59 16.54	51 2 3.4
23 0 7.4	8.6	1 5.38	0 38.5	35 35.40	+22.22	-0 8.98	+ 9.49	-1.27	-28.80	23 1 0.44	50 45 37.7
23 1 48.6	8.8	2 46.52	2 24.6	49 55.50	+18.26	-0 8.98	+ 9.69	-1.30	-28.80	23 2 41.58	50 31 13.9
23 2 56.0	8.8	3 54.44	3 22.5	17 59.50	+26.18	-0 8.97	+10.07	-1.30	-28.95	23 3 49.51	51 3 18.1
23 4 40.4	8.3	5 39.04	5 17.3	27 23.35	+17.87	-0 8.97	+ 9.88	-1.33	-29.05	23 5 34.11	50 53 45.7
23 5 50.3	7.0	6 48.28	6 26.5	48 3.55	+17.70	-0 8.97	+10.77	-1.33	-29.20	23 6 43.35	51 33 6.1
23 6 44.2	8.0	7 42.60	7 17.1	54 45.05	+20.25	-0 8.96	+11.84	-1.31	-29.40	23 7 37.69	52 26 28.1
23 7 42.8	8.7	8 39.20	8 18.3	35 59.60	+16.51	-0 8.97	+11.88	-1.31	-29.50	23 8 34.28	52 45 9.8
23 8 38.3	9.2	9 36.84	9 11.1	21 19.45	+20.19	-0 8.96	+12.13	-1.33	-29.60	23 9 31.92	52 59 53.8
23 9 43.4	8.8	10 42.28	10 11.8	27 38.40	+24.02	-0 8.97	+12.06	-1.33	-29.65	23 10 37.37	52 53 38.6
23 11 4.3	9.1	12 3.84	11 39.4	11 41.15	+20.41	-0 8.98	+ 8.92	-1.43	-29.15	23 11 58.91	50 9 29.6
23 13 0.6	8.8	14 0.42	13 36.3	21 6.55	+19.80	-0 8.97	+ 9.84	-1.44	-29.40	23 13 55.49	51 0 4.4
23 16 35.7	8.8	17 36.14	17 11.4	9 15.55	+20.65	-0 8.98	+ 9.24	-1.51	-29.35	23 17 31.20	50 11 55.9
23 18 16.6	8.9	19 16.94	18 43.3	2 37.35	+28.02	-0 8.98	+ 9.04	-1.53	-29.45	23 19 12.00	50 18 41.1
23 19 16.1	7.8	20 16.14	19 50.6	51 44.60	+20.27	-0 8.95	+11.60	-1.49	-29.90	23 20 11.24	52 29 28.2
23 19 37.0	6.0	20 36.48	21 0.6	51 44.60	-19.16	-0 8.95	+11.62	-1.49	-29.90	23 20 31.59	52 28 48.8
23 21 51.7	9.2	22 53.44	22 31.0	3 11.70	+18.68	-0 8.97	+ 9.27	-1.58	-29.55	23 22 48.51	50 17 57.6
23 23 55.6	9.0	24 57.54	24 37.2	55 32.25	+16.88	-0 8.97	+ 9.16	-1.60	-29.65	23 24 52.62	50 25 35.2
23 25 5.8	8.7	26 6.14	25 37.9	30 36.80	+22.75	-0 8.96	+10.71	-1.59	-29.95	23 26 1.23	51 50 37.9
23 26 30.2	9.0	27 31.54	27 3.0	12 25.10	+23.85	-0 8.97	+ 8.93	-1.65	-29.65	23 27 26.61	50 8 49.1
23 27 8.4	9.0	28 10.48	27 56.7	27 24.20	+11.36	-0 8.96	+ 9.97	-1.64	-29.85	23 28 5.56	50 53 38.3
23 28 31.2	9.1	29 32.52	29 2.6	33 59.40	+24.68	-0 8.97	+ 9.82	-1.66	-29.90	23 29 27.60	50 47 16.3
23 28 52.5	9.0	29 54.78	.....	.....	.....	-0 8.97	.....	-1.66	.....	23 29 49.86	.....
23 29 32.0	8.8	30 33.32	30 28.4	52 8.15	+ 3.98	-0 8.96	+10.77	-1.66	-30.05	23 30 28.41	51 28 47.7
23 32 3.0	6.8	33 4.48	32 36.4	47 0.45	+22.81	-0 8.96	+10.54	-1.69	-30.10	23 32 59.58	51 34 14.0
23 33 3.2	9.0	34 5.52	33 37.5	29 22.50	+23.08	-0 8.96	+ 9.99	-1.74	-30.00	23 34 0.59	50 51 51.8
23 35 5.6	9.0	36 8.88	35 39.0	17 28.25	+24.53	-0 8.96	+ 9.95	-1.74	-30.10	23 36 3.98	51 3 47.4
23 36 34.0	9.0	37 37.38	37 4.5	46 54.05	+27.28	-0 8.97	+ 9.31	-1.77	-30.05	23 37 32.47	50 34 23.8
23 37 41.5	8.8	38 44.48	38 20.6	7 56.65	+19.96	-0 8.97	+ 9.23	-1.80	-30.00	23 38 39.55	50 13 13.8
23 38 59.7	9.3	40 3.68	39 45.9	46 21.95	+14.67	-0 8.96	+ 9.46	-1.81	-30.10	23 39 58.77	50 34 43.4
23 39 48.5	7.5	40 51.44	40 24.8	49 6.00	+22.08	-0 8.96	+ 9.59	-1.82	-30.10	23 40 46.53	50 32 6.9
23 40 50.0	8.8	41 53.36	41 22.1	12 43.25	+25.64	-0 8.95	+10.05	-1.83	-30.25	23 41 48.46	51 8 33.5
23 41 44.5	9.0	42 48.20	42 22.8	13 20.90	+20.81	-0 8.95	+10.20	-1.84	-30.25	23 42 43.30	51 7 51.2
23 42 50.2	9.8	43 54.86	43 43.5	13 35.00	+ 9.54	-0 8.96	+ 9.18	-1.87	-30.10	23 43 49.95	50 7 25.0
23 43 46.1	9.2	44 49.34	44 38.4	38 10.95	+ 9.01	-0 8.96	+ 9.86	-1.87	-30.25	23 44 44.44	50 42 49.1

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
						m s	"	s	"		
h m s 23 43 46.1	6.8	m s 44 50.76	m s 45 24.9	' " 38 10.95	" -28.19	m s -0 8.96	" + 9.58	s -1.87	" -30.25	h m s 23 44 45.86	° ' " 50 42 11.6
ZONE 265, DECEMBER 9, 1873.											
0 30 23.9	7.5	31 32.74	30 56.2	46 24.95	+30.26	-0 7.60	+ 8.70	-2.49	-30.70	0 31 29.24	50 34 53.6
0 31 6.8	9.0	32 15.32	32 2.1	34 31.40	+10.90	-0 7.59	+ 9.56	-2.50	-30.75	0 32 11.83	50 46 28.6
0 32 15.4	9.1	33 24.42	33 1.6	12 46.95	+19.08	-0 7.60	+ 8.56	-2.51	-30.60	0 33 20.92	50 8 20.3
0 33 12.2	9.0	34 22.06	34 3.5	22 43.50	+15.29	-0 7.59	+10.62	-2.53	-30.95	0 34 18.59	51 58 21.6
0 33 12.2	9.8	34 23.44	33 59.8	22 43.50	+19.40	-0 7.59	+10.57	-2.53	-30.95	0 34 19.97	51 58 25.7
0 34 45.6	8.2	35 55.30	35 26.2	36 25.50	+23.53	-0 7.59	+10.11	-2.55	-30.90	0 35 51.83	51 44 47.4
0 36 17.0	9.3	37 27.58	36 45.8	6 4.55	+34.90	-0 7.60	+ 8.26	-2.57	-30.60	0 37 24.07	50 15 18.1
0 36 17.0	9.4	37 28.46	37 23.1	6 4.55	+ 4.51	-0 7.60	+ 8.71	-2.57	-30.60	0 37 24.95	50 14 48.2
0 38 32.7	8.7	39 42.18	39 17.1	20 47.95	+20.62	-0 7.59	+ 9.26	-2.61	-30.75	0 39 38.69	51 0 21.2
0 39 30.5	8.7	40 40.88	40 27.2	20 11.70	+11.50	-0 7.60	+ 8.23	-2.62	-30.55	0 40 37.36	50 0 47.5
0 40 39.5	5.0	41 49.16	41 26.8	3 57.00	+18.68	-0 7.60	+ 8.86	-2.63	-30.60	0 41 45.66	50 17 9.9
0 42 1.7	8.8	43 13.82	42 53.5	22 21.55	+16.69	-0 7.59	+ 9.48	-2.66	-30.70	0 43 10.33	50 58 43.8
0 42 41.7	6.0	43 52.40	43 41.9	31 19.90	+ 8.66	-0 7.59	+ 9.28	-2.66	-30.65	0 43 48.92	50 49 37.3
0 44 26.8	8.4	45 37.62	45 10.8	45 16.30	+21.74	-0 7.59	+ 9.86	-2.69	-30.80	0 45 34.15	51 35 54.3
0 46 18.9	9.5	47 31.10	47 11.9	17 11.65	+15.75	-0 7.59	+ 9.56	-2.72	-30.70	0 47 27.61	51 3 52.7
0 47 52.9	8.0	49 5.14	48 39.9	32 20.55	+20.34	-0 7.58	+10.33	-2.75	-30.80	0 49 1.67	51 48 49.0
0 49 23.0	9.1	50 35.58	50 10.4	55 48.80	+20.96	-0 7.59	+ 8.60	-2.75	-30.50	0 50 32.09	50 25 19.9
0 50 32.0	9.1	51 44.12	51 23.8	20 23.70	+17.03	-0 7.59	+ 8.19	-2.77	-30.45	0 51 40.62	50 0 40.7
0 51 47.2	8.8	52 59.20	52 32.8	38 33.05	+21.83	-0 7.59	+ 9.24	-2.79	-30.55	0 52 55.71	50 42 37.0
0 52 48.6	7.8	54 1.04	53 39.5	58 13.25	+17.52	-0 7.58	+10.00	-2.81	-30.65	0 53 57.57	51 22 53.1
0 54 26.6	7.0	55 39.52	55 13.4	13 38.15	+21.40	-0 7.58	+ 9.70	-2.83	-30.60	0 55 36.05	51 7 31.8
0 55 56.3	8.8	57 8.34	56 33.6	48 9.90	+28.79	-0 7.59	+ 8.89	-2.85	-30.45	0 57 4.84	50 33 6.7
0 57 21.3	8.9	58 34.32	58 10.6	41 37.50	+19.61	-0 7.59	+ 9.01	-2.86	-30.45	0 58 30.80	50 39 29.9
0 58 30.9	9.5	59 44.60	59 37.4	24 21.95	+ 6.05	-0 7.59	+ 8.66	-2.87	-30.30	0 59 41.10	49 56 31.7
1 0 41.6	8.8	1 54.84	1 42.5	24 50.00	+ 9.90	-0 7.58	+10.88	-2.93	-30.60	1 1 51.38	51 56 9.4
1 2 1.3	7.0	3 15.10	2 54.5	0 19.80	+17.16	-0 7.59	+ 8.54	-2.93	-30.30	1 3 11.60	50 20 44.7
1 3 0.9	9.5	4 15.36	4 5.7	29 3.65	+ 7.99	-0 7.58	+ 9.64	-2.95	-30.35	1 4 11.88	50 51 52.7
1 4 36.9	9.1	5 51.96	5 20.0	55 22.05	+26.62	-0 7.59	+ 8.50	-2.96	-30.25	1 5 48.47	50 25 51.8
1 17 8.3	8.9	18 26.26	18 11.8	36 46.00	+11.72	-0 7.57	+10.31	-3.15	-30.15	1 18 22.82	51 44 14.2
1 18 45.3	8.5	20 1.52	19 37.9	11 34.45	+19.32	-0 7.57	+ 9.54	-3.17	-30.00	1 19 58.06	51 9 32.6
ZONE 266, DECEMBER 10, 1873.											
0 30 23.9	7.8	31 32.04	31 9.3	46 17.70	+18.82	-0 6.96	+ 9.24	-2.47	-30.80	0 31 29.20	50 34 51.3
0 31 6.8	9.1	32 14.54	31 56.9	34 36.90	+14.53	-0 6.96	+ 9.86	-2.48	-30.85	0 32 11.70	50 46 28.4
0 32 15.4	9.1	33 23.70	32 54.2	12 54.00	+24.68	-0 6.97	+ 8.80	-2.50	-30.70	0 33 20.84	50 8 20.5
0 33 12.2	9.0	34 21.24	34 12.5	22 38.30	+ 7.15	-0 6.95	+11.09	-2.51	-31.05	0 34 18.43	51 58 20.6
0 33 12.2	9.8	34 23.08	34 7.0	22 38.30	+13.40	-0 6.95	+11.04	-2.51	-31.05	0 34 20.27	51 58 26.7
0 34 45.6	8.5	35 54.56	35 27.7	36 25.00	+21.75	-0 6.95	+10.53	-2.53	-31.00	0 35 51.75	51 44 47.9
0 36 17.0	9.5	37 26.88	36 43.9	6 6.30	+35.90	-0 6.97	+ 8.47	-2.55	-30.70	0 37 24.02	50 15 19.0
0 36 17.0	9.4	37 27.68	37 24.8	6 6.30	+ 2.42	-0 6.97	+ 8.97	-2.55	-30.70	0 37 24.82	50 14 46.0
0 38 32.7	8.9	39 41.60	39 13.2	20 52.00	+23.33	-0 6.96	+ 9.59	-2.59	-30.85	0 39 38.76	51 0 21.6
0 39 30.5	8.6	40 40.24	40 18.4	20 19.85	+18.29	-0 6.97	+ 8.47	-2.60	-30.65	0 40 37.37	50 0 47.7
0 40 39.5	5.2	41 48.44	41 30.2	3 54.60	+15.18	-0 6.97	+ 9.22	-2.61	-30.70	0 41 45.59	50 17 10.5
0 42 1.7	9.0	43 13.08	42 43.5	22 29.85	+24.33	-0 6.96	+ 9.72	-2.64	-30.80	0 43 10.24	50 58 44.8
0 42 41.7	6.0	43 51.78	44 11.4	30 57.25	-16.16	-0 6.96	+ 9.52	-2.65	-30.75	0 43 48.94	50 49 36.7
0 44 26.8	7.9	45 36.86	45 11.9	45 15.45	+20.28	-0 6.95	+10.26	-2.67	-30.90	0 45 34.05	51 35 55.5
0 46 18.9	9.5	47 30.54	47 7.1	17 15.50	+19.20	-0 6.96	+ 9.88	-2.70	-30.80	0 47 27.70	51 3 54.0

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R.A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
0 47 52.9	8.0	49 4.42	48 40.9	32 21.00	+18.97	-0 6.95	+10.76	-2.73	-30.90	0 49 1.60	51 48 49.0
0 49 23.0	9.2	50 34.96	51 8.5	55 53.70	+22.04	-0 6.96	+ 8.96	-2.74	-30.60	0 50 32.11	50 25 17.8
0 50 32.0	9.2	51 43.32	51 27.3	20 21.60	+13.42	-0 6.97	+ 8.55	-2.75	-30.55	0 51 40.46	50 0 40.9
0 51 47.2	8.7	52 58.50	52 41.1	38 28.70	+14.45	-0 6.96	+ 9.69	-2.77	-30.65	0 52 55.66	50 42 35.8
0 52 48.6	8.0	54 0.26	53 51.0	58 4.55	+ 7.58	-0 6.95	+10.48	-2.79	-30.75	0 53 57.44	51 22 53.8
0 54 26.6	7.0	55 38.82	55 18.9	13 34.45	+16.31	-0 6.96	+10.14	-2.81	-30.65	0 55 35.99	51 7 32.3
0 55 56.3	8.5	57 7.66	56 50.0	48 0.05	+14.69	-0 6.96	+ 9.45	-2.83	-30.55	0 57 4.81	50 33 4.4
0 57 21.3	8.9	58 33.64	58 13.7	41 36.85	+16.47	-0 6.96	+ 9.37	-2.85	-30.55	0 58 30.76	50 39 29.2
0 58 30.9	9.6	59 43.98	59 21.8	24 37.50	+18.65	-0 6.97	+ 8.89	-2.85	-30.40	0 59 41.12	49 56 30.4
1 0 41.6	8.6	1 54.14	1 39.7	24 52.55	+11.59	-0 6.95	+11.28	-2.91	-30.70	1 1 51.33	51 56 10.3
1 2 1.3	7.5	3 14.32	3 2.6	0 12.60	+ 9.75	-0 6.96	+ 8.96	-2.91	-30.40	1 3 11.47	50 20 46.3
1 3 0.9	9.6	4 14.64	3 59.7	29 8.60	+12.28	-0 6.96	+ 9.96	-2.93	-30.50	1 4 11.80	50 51 53.7
1 4 36.9	9.1	5 51.08	5 24.8	55 19.25	+21.88	-0 6.96	+ 8.92	-2.95	-30.35	1 5 48.23	50 25 51.7
1 17 8.3	9.0	18 25.42	18 9.3	36 49.60	+13.02	-0 6.95	+10.71	-3.14	-30.30	1 18 22.61	51 44 13.6
1 18 45.3	8.3	20 0.68	19 49.9	11 24.05	+ 8.84	-0 6.96	+10.02	-3.16	-30.15	1 19 57.84	51 9 34.3
1 19 51.1	8.8	21 6.80	20 51.7	6 52.95	+12.34	-0 6.96	+10.15	-3.17	-30.10	1 21 3.97	51 14 9.1
1 21 40.8	9.1	22 57.24	22 48.5	54 2.05	+ 7.08	-0 6.95	+10.59	-3.20	-30.10	1 22 54.42	51 26 55.0
1 22 47.6	8.8	24 4.36	23 47.2	22 25.75	+13.83	-0 6.95	+11.04	-3.24	-30.15	1 24 1.54	51 58 38.4
1 25 13.5	8.8	26 29.40	26 9.7	9 37.10	+16.12	-0 6.96	+10.35	-3.24	-29.90	1 26 26.57	51 11 28.7
1 27 38.4	7.5	28 54.64	28 40.1	14 28.95	+11.88	-0 6.96	+10.28	-3.27	-29.85	1 28 51.81	51 6 32.5
1 28 21.5	9.0	29 38.95	29 47.8	21 10.05	- 7.15	-0 6.95	+10.99	-3.31	-29.95	1 29 36.14	51 59 32.9
1 29 36.7	9.2	30 53.68	30 49.0	27 58.40	+ 3.79	-0 6.95	+11.14	-3.32	-29.90	1 30 50.87	51 52 55.6
1 30 51.2	9.0	32 8.86	31 48.3	38 35.95	+16.67	-0 6.95	+10.83	-3.33	-29.80	1 32 6.05	51 42 30.7
1 33 0.5	9.0	34 18.64	33 54.9	3 30.30	+18.93	-0 6.95	+11.44	-3.38	-29.80	1 34 15.84	52 17 39.0
1 34 19.8	8.9	35 38.20	35 31.2	41 16.15	+ 5.66	-0 6.94	+11.74	-3.40	-29.80	1 35 35.42	52 39 40.1
1 35 7.3	7.9	36 26.46	36 15.0	47 27.60	+ 9.13	-0 6.94	+11.73	-3.41	-29.80	1 36 23.68	52 33 32.1
1 36 24.0	8.9	37 42.86	37 18.3	53 33.90	+19.57	-0 6.94	+11.62	-3.43	-29.70	1 37 40.07	52 27 36.1
1 37 54.1	8.5	39 12.58	38 54.6	6 35.40	+14.39	-0 6.95	+11.23	-3.45	-29.55	1 39 9.77	52 14 29.1
1 39 1.3	8.0	40 20.38	39 59.4	43 40.45	+16.64	-0 6.94	+11.85	-3.47	-29.65	1 40 17.60	52 37 26.7
1 41 34.9	8.5	42 54.06	42 37.9	49 9.50	+12.57	-0 6.94	+11.90	-3.50	-29.50	1 42 51.28	52 31 53.6
1 42 33.6	9.2	43 53.18	43 31.7	28 21.85	+16.94	-0 6.94	+12.10	-3.53	-29.50	1 43 50.40	52 52 45.7
1 42 34.4	9.1	43 54.34	44 32.2	28 21.85	-29.86	-0 6.94	+12.01	-3.53	-29.50	1 43 51.56	52 51 58.9
1 44 1.9	9.2	45 22.18	45 12.8	5 1.90	+ 7.51	-0 6.95	+11.17	-3.53	-29.35	1 45 19.38	52 15 55.4
ZONE 267, DECEMBER 15, 1873.											
1 21 40.8	8.8	22 55.28	22 32.1	54 14.30	+18.88	-0 5.17	+10.65	-3.12	-30.65	1 22 54.32	51 26 54.2
1 22 47.6	8.7	24 2.44	23 42.5	22 27.80	+16.00	-0 5.16	+11.06	-3.14	-30.75	1 24 1.51	51 58 38.0
1 25 13.5	8.7	26 27.38	26 17.9	9 28.60	+ 7.77	-0 5.17	+10.48	-3.16	-30.55	1 26 26.42	51 11 28.5
1 26 9.5	8.9	27 24.74	27 11.6	9 12.40	+10.47	-0 5.19	+10.45	-3.17	-30.55	1 27 23.76	51 11 47.3
1 27 38.4	8.0	28 52.74	28 33.9	14 31.85	+15.41	-0 5.17	+10.31	-3.19	-30.50	1 28 51.78	51 6 32.6
1 28 21.5	9.6	29 37.44	30 11.2	20 50.50	-27.16	-0 5.16	+10.70	-3.24	-30.65	1 29 36.49	51 59 31.6
1 30 51.2	9.5	32 7.00	31 54.9	38 27.80	+ 9.79	-0 5.17	+10.81	-3.24	-30.55	1 32 6.06	51 42 31.3
1 34 19.8	8.8	35 36.34	35 10.4	41 30.85	+20.51	-0 5.16	+11.63	-3.32	-30.70	1 35 35.42	52 39 39.4
1 35 7.3	8.9	36 24.76	36 10.1	47 30.00	+11.67	-0 5.16	+11.76	-3.33	-30.65	1 36 23.84	52 33 31.5
ZONE 268, DECEMBER 16, 1873.											
1 21 40.8	8.7	22 54.70	22 33.6	54 12.50	+17.17	-0 4.61	+10.57	-3.10	-30.75	1 22 54.32	51 26 53.4
1 22 47.6	8.6	24 1.88	23 29.9	22 37.10	+25.74	-0 4.60	+10.82	-3.13	-30.80	1 24 1.52	51 58 37.4
1 25 13.5	8.4	26 26.90	26 3.0	9 39.20	+19.55	-0 4.61	+10.29	-3.14	-30.60	1 26 26.52	51 11 28.7
1 27 38.4	7.4	28 52.06	28 42.4	14 23.95	+ 7.95	-0 4.61	+10.19	-3.18	-30.50	1 28 51.67	51 6 32.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	s	s	"	h m s	° ' "
1 28 21.5	9.1	29 36.46	29 13.5	21 35.70	+18.49	-0 4.60	+10.85	-3.21	-30.65	1 29 36.10	51 59 31.4
1 29 36.7	9.0	30 51.08	30 20.6	28 18.60	+24.58	-0 4.61	+10.83	-3.22	-30.60	1 30 50.71	51 52 54.5
1 30 51.2	8.9	32 6.32	31 45.0	38 36.35	+17.23	-0 4.61	+10.78	-3.23	-30.50	1 32 5.95	51 42 29.4
1 33 0.5	9.0	34 16.04	33 46.9	3 34.45	+23.24	-0 4.59	+11.32	-3.28	-30.55	1 34 15.69	52 17 37.7
1 34 19.8	8.8	35 35.68	35 6.9	41 33.15	+22.81	-0 4.59	+11.50	-3.31	-30.60	1 35 35.34	52 39 38.6
1 35 7.3	8.0	36 24.08	36 5.6	47 32.10	+14.68	-0 4.59	+11.64	-3.32	-30.55	1 36 23.74	52 33 31.6
1 36 24.0	8.6	37 40.30	37 16.4	53 33.30	+19.01	-0 4.59	+11.63	-3.34	-30.45	1 37 39.95	52 27 34.7
1 37 54.1	8.7	39 10.08	38 45.8	6 40.50	+19.42	-0 4.59	+11.13	-3.35	-30.40	1 39 9.73	52 14 27.4
1 41 34.9	8.4	42 51.44	42 25.0	49 15.55	+20.97	-0 4.59	+11.75	-3.41	-30.30	1 42 51.10	52 31 54.3
1 42 33.6	9.0	43 50.56	43 18.8	28 29.60	+25.06	-0 4.59	+11.94	-3.44	-30.30	1 43 50.22	52 52 44.5
1 42 34.4	8.8	43 51.76	44 19.1	28 29.60	-21.51	-0 4.59	+12.00	-3.44	-30.30	1 43 51.42	52 51 58.0
1 44 1.9	9.0	45 19.68	44 50.1	5 16.45	+23.65	-0 4.59	+10.93	-3.44	-30.15	1 45 19.33	52 15 55.3
1 46 45.8	8.0	48 3.64	47 43.4	21 27.70	+15.87	-0 4.57	+11.99	-3.50	-30.15	1 48 3.32	52 59 37.1
1 49 3.6	7.3	50 20.68	49 56.3	4 9.05	+19.93	-0 4.59	+10.37	-3.49	-29.75	1 50 20.29	51 16 58.4
1 50 17.9	8.9	51 34.44	51 22.0	40 7.65	+10.26	-0 4.59	+ 9.32	-3.49	-29.60	1 51 34.04	50 40 49.0
1 51 47.5	8.6	53 5.58	52 41.4	38 3.00	+19.58	-0 4.59	+10.75	-3.53	-29.75	1 53 5.21	51 43 4.2
1 52 44.2	8.8	54 2.34	53 37.5	57 1.45	+20.20	-0 4.59	+10.26	-3.54	-29.60	1 54 1.95	51 24 6.0
1 54 21.8	9.1	55 40.14	55 14.5	23 36.20	+21.05	-0 4.59	+ 9.93	-3.55	-29.45	1 55 39.74	50 57 31.8
1 55 32.3	8.8	56 51.24	56 22.9	37 36.45	+23.39	-0 4.60	+ 9.50	-3.55	-29.35	1 56 50.83	50 43 33.4
1 56 4.2	6.5	57 21.26	57 15.1	18 15.05	+ 5.20	-0 4.60	+ 9.00	-3.54	-29.15	1 57 20.83	50 2 36.3
1 57 15.6	8.5	58 33.14	57 58.9	37 30.00	+28.26	-0 4.60	+ 9.39	-3.58	-29.30	1 58 32.72	50 43 44.6
1 58 13.2	8.3	59 30.64	59 7.4	51 4.45	+19.27	-0 4.60	+ 9.14	-3.59	-29.20	1 59 30.21	50 30 0.9
1 59 12.6	8.6	0 32.66	0 0.5	5 38.90	+25.73	-0 4.58	+10.93	-3.66	-29.50	2 0 32.30	52 15 34.3
.....	9.4	2 9.00	2 50.7	43 1.45	-33.05	-0 4.57	+11.44	-3.69	-29.45	2 2 8.64	52 37 13.4
2 1 0.4	8.0	2 19.12	1 36.3	44 1.45	+33.94	-0 4.57	+11.30	-3.69	-29.45	2 2 18.78	52 37 20.2
2 1 50.1	9.0	3 10.48	3 31.4	40 1.95	-16.54	-0 4.57	+11.48	-3.71	-29.40	2 3 10.14	52 40 29.4
2 3 2.1	8.7	4 22.84	4 8.5	28 47.85	+11.27	-0 4.57	+12.22	-3.73	-29.40	2 4 22.51	52 52 11.9
2 4 18.2	9.0	5 37.98	5 33.2	5 38.10	+ 3.84	-0 4.57	+11.22	-3.73	-29.20	2 5 37.63	52 15 13.3
2 5 49.2	6.8	7 8.32	6 44.5	25 30.30	+19.16	-0 4.58	+10.71	-3.74	-29.10	2 7 7.94	51 55 35.9
2 8 20.9	8.0	9 39.74	9 11.4	9 3.00	+23.15	-0 4.58	+10.25	-3.73	-28.85	2 9 39.36	51 12 6.8
2 9 30.8	9.4	10 50.74	10 28.1	6 30.05	+18.47	-0 4.58	+10.05	-3.76	-28.80	2 10 50.34	51 14 34.8
2 11 49.4	8.2	13 9.26	13 13.1	37 47.70	- 3.14	-0 4.58	+ 9.76	-3.77	-28.55	2 13 8.85	50 42 55.2
2 13 59.7	8.2	15 19.60	15 1.6	32 42.55	+14.53	-0 4.57	+10.91	-3.84	-28.65	2 15 19.22	51 48 18.9
2 14 49.4	9.3	16 10.32	15 52.8	1 27.65	+14.28	-0 4.57	+10.21	-3.83	-28.50	2 16 9.93	51 19 32.9
2 15 7.7	8.8	16 28.14	17 8.1	1 27.65	-32.63	-0 4.57	+ 9.86	-3.84	-28.50	2 16 27.75	51 18 45.6
2 16 44.4	8.0	18 5.06	17 45.1	12 39.95	+16.38	-0 4.57	+10.13	-3.85	-28.35	2 18 4.66	51 8 22.6
2 18 9.7	7.5	19 29.34	19 11.7	21 52.50	+14.15	-0 4.56	+11.03	-3.90	-28.45	2 19 28.98	51 59 8.5
2 19 36.7	8.9	21 5.94	20 45.0	29 1.45	+17.22	-0 4.57	+ 9.97	-3.88	-28.15	2 21 5.60	51 52 1.7
2 20 47.5	8.5	22 7.62	21 45.2	20 32.95	+18.79	-0 4.58	+ 8.55	-3.86	-27.95	2 22 7.17	50 0 30.4
2 21 31.7	8.8	22 54.24	22 57.8	35 39.65	- 2.91	-0 4.57	+10.72	-3.94	-28.20	2 22 53.85	51 45 3.8
2 21 52.8	9.2	23 16.08	23 23.5	35 39.65	- 5.98	-0 4.57	+10.71	-3.94	-28.15	2 23 15.70	51 45 0.8
2 23 24.3	6.5	24 45.72	24 22.8	35 45.30	+18.51	-0 4.57	+10.54	-3.96	-28.10	2 24 45.34	51 45 19.4
2 24 25.2	9.0	25 46.62	25 17.4	29 18.15	+23.63	-0 4.56	+11.06	-3.98	-28.05	2 25 46.25	51 51 52.1
2 25 44.7	8.8	27 5.50	26 44.7	36 51.80	+16.81	-0 4.57	+10.72	-3.99	-27.90	2 27 5.11	51 44 11.3
2 26 51.8	6.5	28 13.94	27 56.	56 10.65	+14.25	-0 4.57	+10.31	-3.99	-27.80	2 28 13.54	51 24 49.5
2 29 37.2	9.3	30 59.72	30 21.2	3 36.05	+31.43	-0 4.56	+10.12	-4.02	-27.60	2 30 59.33	51 17 41.0
2 29 51.8	9.3	31 14.76	30 53.0	3 36.05	+17.80	-0 4.56	+10.39	-4.03	-27.60	2 31 14.36	51 17 27.6
2 31 11.8	9.1	32 33.88	32 9.4	22 36.45	+20.14	-0 4.56	+ 9.90	-4.03	-27.45	2 32 33.47	50 58 29.0
2 32 26.6	8.7	33 47.60	33 17.8	5 9.05	+24.35	-0 4.56	+ 9.87	-4.05	-27.45	2 33 47.20	51 16 0.5
2 33 31.7	9.6	34 54.84	34 26.5	28 21.50	+22.81	-0 4.55	+10.99	-4.10	-27.45	2 34 54.46	51 52 47.5
2 34 36.9	8.4	35 59.40	35 39.5	34 33.80	+16.07	-0 4.56	+11.11	-4.11	-27.35	2 35 59.01	51 46 28.5
2 36 44.9	9.0	38 8.50	37 43.9	51 43.90	+20.00	-0 4.56	+10.40	-4.12	-27.15	2 38 8.10	51 29 21.6
2 37 41.5	8.5	39 5.24	38 44.6	33 19.45	+16.63	-0 4.56	+10.98	-4.15	-27.15	2 39 4.85	51 47 43.2
2 38 15.5	9.1	39 39.08	39 56.7	19 35.75	-14.45	-0 4.56	+10.27	-4.12	-26.95	2 39 38.66	51 0 55.2
2 38 21.0	9.0	39 43.96	39 49.5	19 35.75	- 4.52	-0 4.56	+10.35	-4.12	-26.95	2 39 43.54	51 1 5.2
2 39 17.8	9.1	40 40.86	41 1.9	52 37.15	-17.08	-0 4.56	+10.52	-4.15	-27.00	2 40 40.46	51 27 51.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s "	"	h m s	° ' "
2 40 23.0	9.0	41 47.18	41 33.4	2 8.10	+11.26	-0 4.56	+10.37	-4.16	-26.90	2 41 46.77	51 18 48.5
2 41 52.2	8.5	43 14.82	42 53.6	40 5.15	+17.16	-0 4.56	+10.48	-4.19	-26.85	2 43 14.43	51 40 57.3
2 43 8.6	9.0	44 32.18	43 50.1	49 57.75	+34.95	-0 4.57	+ 8.78	-4.15	-26.60	2 44 31.74	50 31 20.9
2 43 13.9	8.8	44 37.00	44 20.2	49 57.75	+13.95	-0 4.57	+ 9.17	-4.15	-26.60	2 44 36.56	50 31 0.3
2 44 28.2	8.6	45 53.34	45 33.0	17 14.50	+16.30	-0 4.54	+11.17	-4.24	-26.70	2 45 52.97	52 3 47.7
2 45 45.2	8.7	47 9.32	46 50.7	9 12.10	+15.22	-0 4.55	+10.43	-4.22	-26.50	2 47 8.91	51 11 48.3
2 47 5.7	8.8	48 29.60	48 3.4	51 17.20	+21.76	-0 4.56	+ 9.19	-4.20	-26.30	2 48 29.16	50 29 48.5
2 48 32.3	9.5	49 58.08	49 29.7	37 43.45	+22.46	-0 4.54	+11.87	-4.33	-26.50	2 49 57.73	52 43 25.3
2 49 46.1	8.8	51 10.58	50 44.2	14 6.60	+21.64	-0 4.55	+10.25	-4.26	-26.25	2 51 10.17	51 6 59.8
2 50 33.7	6.0	51 58.72	51 36.5	29 53.20	+17.90	-0 4.54	+11.26	-4.31	-26.25	2 51 58.34	51 51 10.4
2 50 33.7	7.5	52 0.14	51 37.3	29 52.20	+18.38	-0 4.54	+11.25	-4.31	-26.25	2 51 59.76	51 51 11.9
ZONE 269, DECEMBER 17, 1873.											
1 49 3.6	7.8	50 20.10	50 14.1	3 52.90	+ 4.90	-0 3.99	+10.38	-3.47	-29.90	1 50 20.33	51 16 59.2
1 50 17.9	9.0	51 33.80	51 20.8	40 5.95	+10.76	-0 4.00	+ 9.21	-3.47	-29.75	1 51 34.01	50 40 50.8
1 51 47.5	8.8	53 4.86	52 39.2	38 4.00	+20.79	-0 3.99	+10.61	-3.51	-29.85	1 53 5.11	51 43 4.0
1 52 44.2	8.9	54 1.73	53 53.0	56 47.75	+ 7.08	-0 3.99	+10.26	-3.52	-29.75	1 54 1.96	51 24 6.3
1 54 21.8	8.9	55 39.48	55 9.3	23 40.20	+24.83	-0 3.99	+ 9.76	-3.53	-29.60	1 55 39.70	50 57 31.1
1 55 32.3	8.8	56 50.58	56 30.9	37 28.20	+16.28	-0 4.00	+ 9.49	-3.54	-29.50	1 56 50.78	50 43 34.2
1 56 4.2	7.0	57 20.74	57 16.2	18 12.70	+ 3.77	-0 4.00	+ 8.89	-3.53	-29.35	1 57 20.92	50 2 36.7
1 57 15.6	8.6	58 32.44	58 5.6	37 23.05	+22.15	-0 4.00	+ 9.42	-3.56	-29.40	1 58 32.64	50 43 45.2
1 58 13.2	8.0	59 29.92	59 4.9	51 3.75	+20.77	-0 4.00	+ 9.01	-3.57	-29.35	1 59 30.11	50 30 2.6
1 59 12.6	8.5	0 31.92	0 50.3	4 57.60	-15.04	-0 3.99	+10.93	-3.64	-29.60	2 0 32.17	52 15 34.6
2 1 50.1	9.0	3 9.80	2 46.4	40 35.85	+18.51	-0 3.98	+11.41	-3.69	-29.55	2 3 10.07	52 40 30.1
2 3 2.1	9.0	4 22.24	3 55.3	28 56.45	+21.19	-0 3.98	+11.98	-3.72	-29.50	2 4 22.51	52 52 12.8
2 4 18.2	9.0	5 37.32	5 29.8	5 39.10	+ 5.99	-0 3.99	+11.06	-3.71	-29.35	2 5 37.57	52 15 14.0
2 5 49.2	6.7	7 7.62	6 45.8	25 26.70	+17.55	-0 3.99	+10.57	-3.72	-29.20	2 7 7.85	51 55 37.5
2 7 12.3	8.5	8 31.91	8 22.8	2 0.05	+ 7.43	-0 3.99	+10.19	-3.72	-29.05	2 8 32.12	51 18 53.6
2 8 20.9	7.7	9 39.10	9 26.2	8 50.35	+10.55	-0 3.98	+10.24	-3.74	-28.95	2 9 39.31	51 12 6.5
2 9 30.8	9.5	10 50.18	10 29.6	6 26.60	+16.84	-0 3.99	+ 9.91	-3.75	-28.90	2 10 50.39	51 14 36.2
2 10 49.2	...	12 7.76	11 42.3	22 1.50	+20.96	-0 3.98	+ 9.87	-3.76	-28.80	2 12 7.96	50 59 5.3
2 11 49.4	8.5	13 8.68	12 59.1	37 56.90	+ 7.93	-0 3.98	+ 9.52	-3.76	-28.70	2 13 8.88	50 42 56.6
ZONE 270, DECEMBER 18, 1873.											
1 42 33.6	9.2	43 49.24	42 54.1	28 48.25	+43.42	-0 3.28	+11.29	-3.40	-30.55	1 43 50.25	52 52 43.5
1 42 34.4	9.2	43 50.42	43 54.4	28 48.25	- 3.15	-0 3.28	+12.07	-3.40	-30.55	1 43 51.43	52 51 57.7
1 44 1.9	9.2	45 18.40	44 52.2	5 12.80	+20.94	-0 3.29	+10.80	-3.41	-30.35	1 45 19.38	52 15 56.0
1 46 45.8	8.5	48 2.34	47 33.1	21 33.15	+22.42	-0 3.28	+11.69	-3.47	-30.40	1 48 3.34	52 59 37.8
1 49 3.6	8.0	50 19.46	49 57.2	4 6.15	+18.21	-0 3.30	+10.23	-3.45	-30.00	1 50 20.40	51 16 59.3
1 50 17.9	9.1	51 33.10	51 9.2	40 14.50	+19.77	-0 3.30	+ 9.09	-3.45	-29.80	1 51 34.03	50 40 51.4
1 51 47.5	9.0	53 4.24	52 35.5	38 5.90	+23.22	-0 3.29	+10.52	-3.51	-29.95	1 53 5.19	51 43 4.7
1 52 44.2	8.3	54 1.00	53 43.5	56 54.10	+14.25	-0 3.29	+10.15	-3.51	-29.85	1 54 1.94	51 24 7.2
1 54 21.8	9.0	55 38.86	55 19.8	23 30.40	+15.71	-0 3.30	+ 9.83	-3.52	-29.70	1 55 39.78	50 57 32.0
1 55 32.3	8.8	56 50.00	56 14.1	37 41.55	+29.67	-0 3.30	+ 9.22	-3.53	-29.60	1 56 50.91	50 43 34.2
1 56 4.2	7.0	57 19.94	57 41.9	17 50.15	-18.45	-0 3.31	+ 8.68	-3.51	-29.40	1 57 20.83	50 2 37.1
1 57 15.6	8.3	58 31.88	58 11.8	37 17.00	+16.62	-0 3.31	+ 9.42	-3.55	-29.50	1 58 32.78	50 43 45.9
1 58 13.2	7.9	59 29.42	59 4.8	51 3.50	+20.43	-0 3.30	+ 8.96	-3.56	-29.45	1 59 30.32	50 30 2.7
1 59 12.6	8.2	0 31.36	0 19.7	5 21.10	+ 9.35	-0 3.29	+10.94	-3.63	-29.75	2 0 32.32	52 15 35.6
...	9.4	2 7.82	2 56.3	42 53.90	-38.44	-0 3.29	+11.16	-3.66	-29.70	2 2 8.77	52 37 15.2
2 1 0.4	7.7	2 17.66	1 41.6	43 53.90	+28.61	-0 3.29	+11.44	-3.66	-29.70	2 2 18.63	52 37 22.5

R. A. 1855.0 According to B. D.			Obs. Magn.	Mean of R. A. Wires.		Mean of Dec. Wires.		Mean of Circle Readings.		Red. to Horiz. Wire.	Sum of Reductions.			Reduction to beginning of current year.		Mean R. A. 1875.0.			Mean Dec. 1875.0.		
h	m	s		m	s	m	s	"	'		m	s	"	s	"	h	m	s	°	'	"
2	4	18.2	9.0	5	36.68	5	26.2	5	42.15	+ 8.39	-0	3.29	+10.99	-3.71	-29.45	2	5	37.63	52	15	13.4
2	5	49.2	7.0	7	7.00	6	48.4	25	25.45	+14.97	-0	3.29	+10.55	-3.72	-29.35	2	7	7.93	51	55	36.3
2	7	12.3	8.8	8	31.30	8	8.1	2	11.95	+18.93	-0	3.30	+10.04	-3.70	-29.15	2	8	32.22	51	18	53.3
2	8	20.9	8.0	9	38.36	9	13.0	9	1.35	+20.77	-0	3.30	+10.00	-3.72	-29.10	2	9	39.27	51	12	5.7
2	9	30.8	9.6	10	49.58	10	35.2	6	22.75	+11.77	-0	3.30	+ 9.93	-3.73	-29.05	2	10	50.49	51	14	35.1
2	10	49.2	8.5	12	7.06	11	50.8	21	53.70	+13.39	-0	3.30	+ 9.70	-3.74	-28.90	2	12	7.96	50	59	5.6
2	11	49.4	8.0	13	8.04	12	55.8	38	0.40	+10.08	-0	3.30	+ 9.46	-3.74	-28.80	2	13	8.94	50	42	55.4
2	14	49.4	9.1	16	9.06	15	54.5	1	23.75	+11.91	-0	3.29	+10.03	-3.81	-28.75	2	16	9.97	51	19	34.1
2	15	7.7	8.8	16	26.76	17	11.1	1	23.75	-36.14	-0	3.29	+ 9.56	-3.81	-28.75	2	16	27.68	51	18	45.6
2	16	44.4	8.0	18	3.70	17	44.3	12	39.40	+15.89	-0	3.29	+ 9.95	-3.82	-28.60	2	18	4.61	51	8	22.4
2	18	9.7	7.0	19	28.12	19	10.0	21	51.50	+14.55	-0	3.28	+10.82	-3.88	-28.70	2	19	29.06	51	59	9.6
2	19	36.7	8.9	21	4.64	20	39.1	29	3.65	+21.01	-0	3.29	+ 9.72	-3.86	-28.40	2	21	5.60	51	52	2.9
2	20	47.5	8.8	22	6.34	21	48.9	20	28.40	+14.60	-0	3.30	+ 8.42	-3.84	-28.20	2	22	7.19	50	0	30.5
2	21	31.7	9.0	22	52.92	22	35.5	35	56.50	+14.06	-0	3.28	+10.45	-3.91	-28.45	2	22	53.85	51	45	3.6
2	21	52.8	9.6	23	14.84	23	1.7	35	56.50	+10.69	-0	3.28	+10.48	-3.92	-28.45	2	23	15.77	51	45	0.2
2	24	25.2	9.1	25	45.40	25	31.4	29	6.40	+11.33	-0	3.28	+11.00	-3.96	-28.30	2	25	46.33	51	51	51.4
2	25	44.7	8.9	27	4.24	26	45.8	36	48.55	+14.87	-0	3.28	+10.53	-3.97	-28.20	2	27	5.16	51	44	12.3
2	26	2.4	9.3	27	23.76	27	17.8	36	10.55	+ 4.85	-0	3.28	+10.53	-3.97	-28.20	2	27	24.68	51	44	40.2
2	26	51.8	7.4	28	12.54	28	34.3	55	37.20	-17.75	-0	3.29	+ 9.98	-3.97	-28.10	2	28	13.44	51	24	50.4
2	29	37.2	9.4	30	58.60	30	28.2	3	27.60	+24.82	-0	3.29	+10.06	-4.00	-27.90	2	30	59.50	51	17	42.6
2	29	51.8	9.3	31	13.66	30	56.5	3	27.60	+14.04	-0	3.29	+10.23	-4.00	-27.90	2	31	14.56	51	17	32.0
2	31	11.8	9.2	32	32.78	32	3.4	22	39.45	+24.17	-0	3.29	+ 9.62	-4.01	-27.75	2	32	33.66	50	58	29.6
2	32	26.6	8.9	33	46.38	33	16.0	5	9.20	+24.84	-0	3.29	+ 9.64	-4.03	-27.70	2	33	47.27	51	16	0.5
2	33	31.7	9.7	34	53.56	34	27.6	28	19.95	+20.96	-0	3.28	+10.79	-4.08	-27.75	2	34	54.47	51	52	46.8
2	34	36.9	8.5	35	58.14	35	31.7	34	37.90	+21.33	-0	3.28	+10.81	-4.09	-27.65	2	35	59.05	51	46	29.3
2	36	44.9	9.1	38	7.20	37	44.6	51	42.40	+18.37	-0	3.28	+10.17	-4.10	-27.45	2	38	8.10	51	29	21.1
2	37	41.5	7.8	39	3.94	38	43.4	33	19.60	+16.55	-0	3.28	+10.74	-4.13	-27.45	2	39	4.85	51	47	42.5
2	38	15.5	9.2	39	37.88	40	7.1	19	25.90	-23.98	-0	3.29	+ 9.89	-4.10	-27.25	2	39	38.75	51	0	55.0
2	38	21.0	9.0	39	42.70	39	58.2	19	25.90	-12.73	-0	3.29	+10.06	-4.10	-27.25	2	39	43.57	51	1	6.4
2	39	17.8	9.0	40	39.66	40	56.0	52	41.20	-13.17	-0	3.28	+10.35	-4.13	-27.30	2	40	40.56	51	27	50.8
2	40	23.0	9.0	41	45.92	41	38.6	2	2.15	+ 5.96	-0	3.29	+10.17	-4.14	-27.20	2	41	46.80	51	18	48.8
2	41	52.2	8.0	43	13.50	42	53.9	40	2.95	+15.87	-0	3.28	+10.25	-4.17	-27.15	2	43	14.41	51	40	57.8
2	43	8.6	9.2	44	30.92	43	55.1	49	53.75	+29.71	-0	3.29	+ 9.27	-4.14	-26.85	2	44	31.77	50	31	20.1
2	43	13.9	7.8	44	35.74	44	23.0	49	53.75	+10.54	-0	3.29	+ 9.56	-4.14	-26.85	2	44	36.59	50	31	1.2
2	44	28.2	8.6	45	52.12	45	29.0	17	15.80	+18.54	-0	3.28	+10.90	-4.22	-27.00	2	45	53.03	52	3	48.2
2	45	45.2	8.7	47	8.10	46	51.8	9	9.15	+13.34	-0	3.28	+10.24	-4.20	-26.80	2	47	8.98	51	11	49.0
2	47	5.7	8.9	48	28.38	48	6.9	51	12.85	+17.86	-0	3.29	+ 9.04	-4.18	-26.60	2	48	29.23	50	29	48.7
2	48	32.3	9.4	49	56.72	49	24.2	37	47.40	+25.70	-0	3.28	+11.53	-4.31	-26.85	2	49	57.65	52	43	24.0
2	49	46.1	9.0	51	9.10	50	41.7	14	8.05	+22.46	-0	3.29	+10.02	-4.24	-26.50	2	51	9.97	51	6	58.9
2	50	33.7	5.8	51	57.42	51	29.9	29	56.70	+22.16	-0	3.28	+10.83	-4.29	-26.55	2	51	58.32	51	51	10.6
2	50	33.7	7.9	51	58.82	51	30.5	29	56.70	+22.81	-0	3.28	+10.82	-4.29	-26.55	2	51	59.72	51	51	11.2
ZONE 271, DECEMBER 29, 1873.																					
2	24	4.4	8.5	25	22.26	24	51.2	16	13.85	+24.96	+0	1.07	+10.65	-3.80	-30.95	2	25	27.71	52	4	57.7
2	25	21.8	9.0	26	37.54	26	20.4	42	39.30	+14.16	+0	1.06	+ 9.39	-3.76	-30.90	2	26	42.93	50	38	20.1
2	26	51.8	7.6	28	8.22	27	47.3	56	14.35	+17.02	+0	1.07	+10.05	-3.81	-30.95	2	28	13.64	51	24	48.4
2	27	47.9	8.8	29	3.90	28	35.6	5	8.00	+22.66	+0	1.08	+10.66	-3.86	-31.05	2	29	9.36	52	16	0.7
2	29	54.8	9.3	31	11.46	30	50.8	54	8.00	+16.47	+0	1.08	+11.57	-3.90	-30.95	2	31	16.92	52	26	55.3
2	31	23.9	8.8	32	41.12	32	14.9	13	15.05	+21.00	+0	1.08	+11.04	-3.91	-30.85	2	32	46.56	52	7	52.2
2	33	56.7	9.0	35	12.42	34	43.5	55	41.00	+23.53	+0	1.07	+ 9.88	-3.92	-30.55	2	35	17.81	51	25	27.7
2	35	0.5	9.0	36	17.34	35	56.7	9	17.00	+18.03	+0	1.05	+ 9.07	-3.88	-30.30	2	36	22.68	50	11	45.5
2	36	11.5	8.4	37	28.34	37	4.3	43	5.50	+19.02	+0	1.08	+11.59	-4.00	-30.65	2	37	33.79	52	38	0.0
2	37	0.3	8.8	38	17.20	38	6.6	43	38.70	+ 8.36	+0	1.07	+10.68	-3.96	-30.45	2	38	22.60	51	37	15.4

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s "	"	h m s	° ' "
2 38 0.0	8.3	39 17.34	39 2.4	19 24.25	+12.24	+0 1.06	+10.07	-3.96	-30.25	2 39 22.70	51 1 33.1
2 39 8.0	7.8	40 25.34	40 1.3	50 42.60	+19.07	+0 1.08	+11.14	-4.03	-30.45	2 40 30.78	52 30 22.4
2 40 16.5	9.1	41 36.96	41 12.6	16 29.25	+19.58	+0 1.08	+10.77	-4.03	-30.30	2 41 42.38	52 4 35.9
2 41 19.6	8.0	42 35.64	42 1.5	37 53.50	+26.96	+0 1.07	+11.51	-4.07	-30.35	2 42 41.07	52 43 19.6
2 42 15.2	7.7	43 33.80	43 5.8	29 32.00	+22.07	+0 1.08	+11.96	-4.09	-30.30	2 43 39.25	52 51 36.6
2 43 59.9	5.0	45 19.04	44 54.7	6 9.25	+19.43	+0 1.08	+10.93	-4.09	-30.10	2 45 24.45	52 14 55.7
2 45 10.4	9.0	46 29.52	46 4.1	35 44.45	+20.53	+0 1.07	+10.31	-4.09	-30.00	2 46 34.90	51 45 20.9
2 46 43.8	8.5	48 1.10	47 34.9	3 47.50	+21.85	+0 1.05	+ 9.04	-4.04	-29.60	2 48 6.41	50 17 18.2
2 47 25.5	9.0	48 46.28	48 27.5	57 19.40	+14.98	+0 1.08	+11.29	-4.14	-29.95	2 48 51.70	52 23 41.2
2 49 31.6	9.7	50 50.54	50 24.3	28 37.30	+21.54	+0 1.06	+ 9.79	-4.11	-29.55	2 50 55.86	50 52 28.5
2 51 56.5	8.8	53 15.80	52 41.6	24 33.05	+28.13	+0 1.06	+ 9.77	-4.14	-29.40	2 53 21.13	50 56 39.2
2 52 56.5	8.8	54 15.34	53 49.5	25 14.50	+21.23	+0 1.06	+ 9.33	-4.15	-29.30	2 54 20.66	50 55 50.4
2 54 20.0	4.0	55 39.86	55 13.6	20 12.96	+20.66	+0 1.08	+11.60	-4.27	-29.55	2 55 45.28	53 0 53.2
2 55 25.8	8.6	56 44.20	56 23.5	7 57.50	+16.55	+0 1.08	+11.05	-4.25	-29.35	2 56 49.58	52 13 4.1
2 57 5.6	9.0	58 26.36	58 1.1	30 16.50	+20.41	+0 1.07	+10.36	-4.26	-29.15	2 58 31.71	51 50 48.2
3 18 14.1	9.1	19 35.20	19 47.4	20 37.30	-10.24	+0 1.05	+ 8.46	-4.43	-27.30	3 19 40.40	49 59 54.0
3 18 14.1	8.5	19 35.40	19 44.6	20 37.30	- 7.72	+0 1.05	+ 8.47	-4.43	-27.30	3 19 40.60	49 59 56.5
3 19 39.0	8.8	21 0.44	21 27.6	25 28.55	-22.38	+0 1.06	+ 9.32	-4.50	-27.30	3 21 5.68	50 54 51.3
3 20 39.4	7.7	22 0.12	21 50.1	17 48.65	+ 8.38	+0 1.05	+ 8.81	-4.46	-27.10	3 22 5.32	50 3 1.5
3 21 19.8	8.0	22 40.66	22 51.0	21 33.70	- 8.64	+0 1.05	+ 8.57	-4.47	-27.05	3 22 45.85	49 58 59.2
3 23 38.2	8.9	24 59.86	24 31.9	11 35.00	+23.42	+0 1.06	+ 8.58	-4.51	-26.85	3 25 5.05	50 9 29.8
3 24 15.0	9.0	25 37.02	25 27.4	2 31.95	+ 8.00	+0 1.06	+ 9.05	-4.51	-26.80	3 25 42.23	50 18 17.9
ZONE 272, JANUARY 17, 1874.											
3 18 14.1	7.5	19 27.04	19 8.6	15 9.85	-15.48	+0 9.20	+ 8.81	+0.14	-14.80	3 19 40.67	49 59 56.4
3 19 39.0	9.0	20 52.16	20 38.2	20 18.15	-11.55	+0 9.21	+ 9.92	+0.13	-15.00	3 21 5.84	50 54 52.9
3 20 39.4	7.0	21 51.72	21 33.8	12 4.55	-15.04	+0 9.20	+ 8.99	+0.12	-14.80	3 22 5.34	50 3 2.2
3 21 19.8	8.5	22 32.14	22 16.8	16 8.45	-12.87	+0 9.20	+ 8.90	+0.11	-14.80	3 22 45.75	49 59 0.3
3 24 15.0	9.2	25 28.58	25 24.3	57 1.90	- 3.57	+0 9.20	+ 9.35	+0.08	-14.90	3 25 42.19	50 18 16.3
3 26 8.5	8.9	27 22.34	26 59.4	46 53.40	-18.26	+0 9.23	+11.79	+0.07	-15.30	3 27 36.08	52 28 12.0
3 27 32.7	8.7	28 47.32	28 23.7	4 0.90	-18.93	+0 9.23	+11.57	+0.05	-15.30	3 29 1.03	52 11 3.6
3 28 16.5	7.7	29 32.88	29 24.0	50 57.05	- 7.10	+0 9.24	+11.73	+0.04	-15.30	3 29 46.61	52 24 19.4
3 31 0.4	9.2	32 15.30	32 8.8	23 1.80	- 5.36	+0 9.22	+10.08	+0.03	-15.00	3 32 28.94	50 52 14.8
3 32 42.0	8.8	33 57.06	33 31.8	18 27.25	-20.86	+0 9.23	+10.04	0.00	-15.00	3 34 10.69	50 56 33.7
3 34 4.4	7.0	35 18.04	34 55.3	6 19.95	-19.03	+0 9.22	+ 9.01	-0.01	-14.80	3 35 31.61	50 8 41.9
3 35 5.8	9.0	36 22.22	36 11.7	15 5.40	- 8.46	+0 9.24	+11.25	-0.02	-15.20	3 36 35.90	52 0 8.7
3 36 54.9	6.7	38 9.52	37 47.5	6 46.15	-18.06	+0 9.23	+10.21	-0.04	-15.00	3 38 23.13	51 8 17.5
3 37 57.9	9.0	39 12.12	38 49.2	47 39.95	-19.07	+0 9.23	+ 9.45	-0.04	-14.90	3 39 25.71	50 27 21.9
3 38 12.8	7.7	39 27.14	38 58.9	47 39.95	-23.49	+0 9.23	+ 9.38	-0.04	-14.90	3 39 40.73	50 27 17.4
3 38 59.8	8.9	40 15.42	40 7.8	26 39.55	- 6.28	+0 9.23	+ 9.92	-0.05	-14.90	3 40 29.02	50 48 35.5
3 40 26.0	8.7	41 41.68	41 20.5	31 16.20	-17.56	+0 9.22	+ 9.72	-0.07	-14.90	3 41 55.24	50 43 47.3
3 41 41.9	8.8	42 56.88	42 27.7	15 17.40	-24.05	+0 9.23	+ 9.87	-0.08	-15.00	3 43 10.47	50 59 39.5
3 42 57.9	8.6	44 12.62	43 38.9	15 9.70	-28.35	+0 9.22	+ 8.60	-0.09	-14.70	3 44 26.14	49 59 41.9
3 43 54.0	7.3	45 10.16	44 50.7	12 2.15	-15.69	+0 9.24	+10.16	-0.10	-14.90	3 45 23.80	52 3 3.4
3 45 21.1	8.3	46 37.40	46 15.2	5 10.00	-17.82	+0 9.24	+11.34	-0.12	-15.10	3 46 51.03	52 9.54.3
3 46 29.1	9.1	47 46.48	47 23.1	26 39.50	-18.92	+0 9.24	+10.99	-0.13	-15.10	3 48 0.09	51 48 23.2
3 48 0.3	7.0	49 15.68	48 55.0	6 54.55	-17.07	+0 9.23	+10.18	-0.15	-14.90	3 49 29.23	51 8 9.3
3 49 21.4	8.7	50 43.34	50 16.8	32 5.55	-21.01	+0 9.24	+12.07	-0.16	-15.20	3 50 56.98	52 42 55.9
* 3 51 2.0	9.4	52 19.90	51 45.8	0 35.65	-27.32	+0 9.25	+11.27	-0.18	-15.10	3 52 33.51	52 14 18.6
3 52 1.7	8.0	53 19.32	52 56.6	58 25.90	-18.17	+0 9.25	+11.63	-0.19	-15.10	3 53 32.93	52 16 37.8
3 53 13.5	8.0	54 31.12	54 9.8	16 18.00	-16.78	+0 9.25	+12.38	-0.20	-15.30	3 54 44.76	52 58 47.6
3 54 9.3	9.0	55 26.46	55 8.4	46 49.50	-14.43	+0 9.26	+11.84	-0.21	-15.10	3 55 40.07	52 28 18.0
3 55 49.4	...	57 3.42	56 43.2	14 28.00	-16.98	+0 9.23	+ 9.06	-0.20	-14.60	3 57 16.89	50 0 34.5

* 3 52 [33.51]

ZONE 273, JANUARY 18, 1874.											
R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
3 18 14.1	8.4	19 26.06	19 9.6	15 10.65	-13.88	+0 10.11	+ 8.63	+0.16	-14.80	3 19 40.62	49 59 58.3
3 19 39.0	8.9	20 51.14	20 33.2	20 14.65	-14.77	+0 10.11	+ 9.68	+0.15	-15.00	3 21 5.74	50 54 54.2
3 20 39.4	7.5	21 50.76	21 24.8	11 58.05	-21.84	+0 10.11	+ 8.61	+0.14	-14.90	3 22 5.31	50 3 2.7
3 21 19.8	8.0	22 31.34	22 22.5	16 13.85	- 7.40	+0 10.11	+ 8.72	+0.13	-14.80	3 22 45.88	49 59 1.5
3 24 15.0	9.0	25 27.64	25 47.7	57 20.10	+17.19	+0 10.11	+ 9.03	+0.11	-15.00	3 25 42.19	50 18 19.7
3 26 8.5	8.4	27 21.48	27 13.2	47 3.85	- 6.62	+0 10.13	+11.63	+0.09	-15.30	3 27 36.14	52 28 14.3
3 27 32.7	8.6	28 46.40	28 40.1	4 12.85	- 5.05	+0 10.13	+11.42	+0.07	-15.30	3 29 1.03	52 11 6.6
3 28 16.5	7.7	29 31.80	29 47.8	51 16.75	+12.77	+0 10.13	+11.41	+0.06	-15.40	3 29 46.44	52 24 20.4
3 32 42.0	8.5	33 56.14	33 25.4	18 21.90	+25.31	+0 10.13	+ 9.69	+0.02	-15.00	3 34 10.69	50 56 35.5
3 34 4.4	7.7	35 17.16	34 57.8	6 22.50	-16.27	+0 10.12	+ 8.81	+0.01	-14.80	3 35 31.65	50 8 43.2
3 35 5.8	8.8	36 21.28	35 51.9	14 49.30	-23.68	+0 10.14	+11.03	0.00	-15.30	3 36 35.88	52 0 10.5
3 36 54.9	7.5	38 8.70	37 40.9	6 40.85	-22.82	+0 10.13	+ 9.87	-0.02	-15.00	3 38 23.23	51 8 18.9
3 37 57.9	8.8	39 11.40	38 49.7	47 39.20	-18.08	+0 10.12	+ 9.21	-0.02	-14.90	3 39 25.90	50 27 24.7
3 38 12.8	7.0	39 26.26	38 58.6	47 39.20	-23.07	+0 10.12	+ 9.13	-0.02	-14.90	3 39 40.76	50 27 19.6
3 38 59.8	8.8	40 14.60	40 8.2	26 40.60	- 5.27	+0 10.12	+ 9.69	-0.02	-15.00	3 40 29.12	50 48 36.4
3 40 26.0	8.6	41 40.76	41 17.1	31 13.35	-19.63	+0 10.12	+ 9.44	-0.05	-14.90	3 41 55.24	50 43 49.0
3 41 41.9	9.0	42 55.84	42 38.2	15 26.50	-14.49	+0 10.13	+ 9.78	-0.06	-15.00	3 43 10.35	50 59 41.2
3 42 57.9	8.7	44 11.74	43 42.9	15 13.80	-24.22	+0 10.12	+ 8.47	-0.07	-14.70	3 44 26.18	49 59 43.0
3 43 54.0	7.8	45 9.18	44 50.2	12 2.15	-15.29	+0 10.14	+ 9.89	-0.08	-15.00	3 45 23.74	52 3 4.7
3 45 21.1	8.4	46 36.52	46 24.3	5 16.45	- 9.79	+0 10.14	+11.17	-0.10	-15.20	3 46 51.07	52 9 56.8
3 46 29.1	9.1	47 45.50	47 22.1	26 40.80	-18.93	+0 10.15	+10.72	-0.11	-15.10	3 48 0.04	51 48 22.9
3 48 0.3	7.8	49 14.70	48 37.6	6 39.45	-30.45	+0 10.14	+ 9.71	-0.12	-15.00	3 49 29.19	51 8 11.7
3 49 21.4	9.0	50 42.30	50 19.9	32 7.50	-17.76	+0 10.14	+11.79	-0.15	-15.30	3 50 56.85	52 42 58.0
3 52 1.7	8.0	53 18.40	52 46.3	58 17.80	-25.70	+0 10.17	+11.13	-0.17	-15.20	3 53 32.95	52 16 39.0
3 52 43.4	8.9	54 0.00	53 45.6	19 22.85	-11.36	+0 10.15	+12.25	-0.18	-15.40	3 54 14.55	52 55 49.2
3 54 9.3	8.9	55 25.32	55 4.1	46 46.75	-16.90	+0 10.15	+11.52	-0.19	-15.20	3 55 39.84	52 28 19.1
3 55 49.4	6.0	57 2.40	56 32.2	14 18.55	-25.39	+0 10.13	+ 8.66	-0.19	-14.60	3 57 16.78	50 0 36.4
ZONE 274, JANUARY 20, 1874.											
2 26 51.8	7.0	27 57.00	27 42.5	50 25.10	-11.84	+0 11.82	+ 9.20	+0.72	-14.60	2 28 13.62	51 24 50.5
2 27 47.9	8.3	28 52.74	28 46.8	59 20.70	- 4.72	+0 11.83	+11.56	+0.72	-14.90	2 29 9.41	52 16 4.0
2 29 54.8	9.0	31 0.20	30 39.3	48 16.30	-16.67	+0 11.83	+11.60	+0.70	-15.00	2 31 16.87	52 26 56.3
2 31 15.8	8.8	32 19.90	31 57.2	5 28.25	-18.22	+0 11.83	+11.12	+0.68	-14.70	2 32 36.54	52 9 42.5
2 33 56.7	8.9	35 1.08	34 19.3	49 23.70	-34.10	+0 11.83	+ 8.88	+0.66	-14.80	2 35 17.69	51 25 28.7
2 35 0.5	8.2	36 6.00	35 53.0	3 28.20	-10.89	+0 11.81	+ 9.07	+0.65	-14.50	2 36 22.54	50 11 47.8
2 35 56.4	7.9	37 1.98	36 46.7	32 54.65	-12.13	+0 11.83	+11.99	+0.64	-15.10	2 37 18.63	52 42 22.4
2 37 0.3	9.0	38 5.92	37 41.5	37 50.00	-19.82	+0 11.82	+10.74	+0.62	-14.90	2 38 22.51	51 37 18.3
2 38 0.0	7.5	39 6.16	39 14.5	14 0.50	+ 6.83	+0 11.82	+10.18	+0.60	-14.80	2 39 22.71	51 1 33.9
2 38 15.5	9.4	39 22.20	38 44.2	14 0.50	-31.27	+0 11.82	+ 9.81	+0.60	-14.80	2 39 38.75	51 0 55.4
2 39 8.0	8.2	40 14.02	40 0.9	44 52.25	-10.44	+0 11.83	+11.86	+0.61	-15.20	2 40 30.65	52 30 26.1
2 40 16.5	9.3	41 25.64	41 3.7	10 33.05	-17.61	+0 11.83	+11.06	+0.59	-15.10	2 41 42.24	52 4 37.4
2 41 19.6	8.8	42 24.52	42 10.4	31 55.20	-11.18	+0 11.82	+11.96	+0.59	-15.30	2 42 41.15	52 43 22.3
2 42 15.2	8.1	43 22.62	43 11.6	23 41.85	- 8.69	+0 11.83	+12.24	+0.58	-15.30	2 43 39.26	52 51 38.3
2 43 59.9	4.0	45 7.84	44 36.8	0 4.20	-24.84	+0 11.83	+11.12	+0.56	-15.20	2 45 24.44	52 14 58.7
2 45 10.4	9.2	46 18.42	45 49.7	29 41.95	-23.25	+0 11.82	+10.91	+0.54	-15.10	2 46 34.98	51 45 22.4
2 46 43.8	8.8	47 49.92	47 26.2	57 45.25	-19.81	+0 11.81	+ 9.07	+0.51	-14.70	2 48 6.39	50 17 21.0
2 47 25.5	8.8	48 35.06	48 15.5	51 30.75	-15.65	+0 11.83	+11.39	+0.52	-15.30	2 48 51.65	52 23 41.4
2 49 31.6	8.9	50 39.22	50 24.6	22 45.95	-12.06	+0 11.82	+ 9.84	+0.51	-14.90	2 50 55.74	50 52 28.4
2 51 56.5	8.3	53 4.52	52 30.2	18 17.60	-28.20	+0 11.82	+ 9.69	+0.46	-15.30	2 53 21.00	50 56 40.0
2 52 56.5	8.8	54 4.02	53 32.5	19 8.55	-25.98	+0 11.82	+ 9.78	+0.45	-15.30	2 54 20.50	50 55 51.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s 2 54 20.0	3.5	m s 55 28.80	m s 54 56.4	' " 14 6.80	" −25.51	m s +0 11.83	" +12.18	s +0.46	" −15.40	h m s 2 55 45.39	° ' " 53 0 55.7
2 55 25.8	8.5	56 32.92	56 19.0	2 11.90	−11.14	+0 11.83	+11.43	+0.44	−15.10	2 56 49.47	52 13 4.5
2 57 5.6	8.5	58 15.06	57 41.4	24 9.05	−27.24	+0 11.83	+10.81	+0.41	−15.10	2 58 31.57	51 50 50.5
2 58 43.6	9.0	59 50.98	59 21.4	37 16.75	−24.04	+0 11.82	+10.52	+0.40	−15.20	3 0 7.46	51 37 45.5
3 0 29.4	6.8	1 39.12	1 27.4	35 20.75	−9.29	+0 11.82	+11.78	+0.39	−15.50	3 1 55.65	52 39 57.1
3 2 9.0	7.8	3 19.68	3 1.4	50 46.90	−14.61	+0 11.83	+11.45	+0.37	−15.40	3 3 36.20	52 24 25.3
3 3 24.7	7.7	4 33.66	4 0.0	56 6.95	−27.56	+0 11.82	+10.03	+0.35	−15.20	3 4 50.11	51 18 51.0
3 9 39.2	8.6	10 50.66	10 21.8	38 21.00	−23.48	+0 11.82	+10.59	+0.29	−15.30	3 11 7.09	51 36 41.1
3 10 46.7	8.9	11 58.00	11 30.1	11 53.25	−22.45	+0 11.83	+11.08	+0.28	−15.40	3 12 14.46	52 3 10.2
3 11 34.5	8.7	12 43.86	12 28.0	36 9.70	−13.19	+0 11.80	+9.50	+0.27	−15.00	3 13 0.22	50 39 1.8
3 13 11.0	8.5	14 20.16	13 56.1	2 6.35	−20.18	+0 11.81	+8.40	+0.25	−15.00	3 14 36.50	50 12 56.9
3 15 37.0	9.3	16 45.68	16 44.6	20 3.90	−0.91	+0 11.81	+9.82	+0.24	−15.00	3 17 2.05	50 55 19.9
3 16 44.6	9.3	17 56.04	17 51.8	49 0.10	−3.50	+0 11.81	+9.39	+0.18	−15.00	3 18 12.33	50 26 20.6
3 17 38.5	8.2	18 48.28	18 41.0	45 10.55	−6.08	+0 11.80	+9.33	+0.21	−15.10	3 19 4.60	50 30 7.3
3 19 39.0	9.0	20 49.40	20 17.6	20 3.40	−26.23	+0 11.81	+9.55	+0.20	−15.20	3 21 5.75	50 54 54.3
3 20 39.4	7.0	21 49.06	21 19.7	11 59.40	−24.70	+0 11.80	+8.69	+0.17	−15.00	3 22 5.33	50 2 59.1
3 21 19.8	7.9	22 29.56	22 22.2	16 14.80	−6.23	+0 11.80	+8.80	+0.17	−14.90	3 22 45.83	49 59 2.4
3 22 7.4	9.1	23 20.20	23 35.7	48 10.40	+12.64	+0 11.81	+10.54	+0.27	−15.30	3 23 36.65	51 27 26.9
3 23 38.2	9.0	24 48.74	24 16.6	5 24.70	−26.92	+0 11.80	+8.67	+0.15	−15.00	3 25 5.01	50 9 31.4
3 24 15.0	8.9	25 25.92	25 47.1	57 22.90	+17.72	+0 11.80	+9.10	+0.15	−15.00	3 25 42.20	50 18 18.2
ZONE 275, FEBRUARY 4, 1874.											
5 12 26.8	8.7	13 35.96	13 21.7	26 23.90	−11.31	+0 22.83	+11.94	−0.64	−15.80	5 14 2.95	52 48 41.6
5 13 51.4	8.8	14 57.04	14 28.8	59 38.05	−23.59	+0 22.80	+8.97	−0.63	−15.10	5 15 23.86	50 15 12.8
5 15 26.5	8.6	16 31.32	15 57.0	4 58.05	−28.74	+0 22.81	+8.54	−0.65	−15.10	5 16 58.13	50 9 47.0
5 17 7.5	8.5	18 15.16	17 36.1	24 56.50	−32.31	+0 22.83	+9.20	−0.68	−15.20	5 18 42.00	50 49 45.4
5 19 48.8	9.0	20 56.36	20 25.9	2 38.05	−25.00	+0 22.83	+9.94	−0.71	−15.20	5 21 23.19	51 12 11.7
5 20 27.7	9.0	21 36.65	21 28.2	1 29.95	−6.73	+0 22.85	+11.28	−0.73	−15.50	5 22 3.54	52 13 39.1
5 21 53.9	8.0	23 2.82	22 35.1	41 24.20	−22.03	+0 22.86	+11.47	−0.75	−15.50	5 23 29.73	52 33 29.6
5 23 15.0	8.9	24 24.76	23 59.7	14 19.35	−19.76	+0 22.86	+12.20	−0.78	−15.60	5 24 51.67	53 0 37.1
5 24 3.2	8.3	25 11.88	24 51.0	46 21.05	−16.65	+0 22.86	+11.48	−0.77	−15.40	5 25 38.76	52 28 38.0
5 26 56.8	8.2	28 0.18	27 30.5	47 38.95	−24.74	+0 22.83	+9.07	−0.76	−14.80	5 28 26.93	50 27 10.0
5 27 54.2	8.7	29 3.14	28 56.0	15 27.55	−5.97	+0 22.82	+8.67	−0.76	−14.70	5 29 29.85	49 59 39.8
5 29 6.2	7.5	30 14.76	29 52.8	45 10.40	−17.52	+0 22.86	+11.43	−0.82	−15.30	5 30 41.60	52 29 47.4
5 30 44.7	8.0	31 53.40	31 15.1	38 58.00	−30.43	+0 22.86	+11.46	−0.84	−15.25	5 32 20.23	52 35 46.9
5 31 46.7	7.5	32 56.20	32 31.5	49 35.30	−19.71	+0 22.86	+11.53	−0.84	−15.20	5 33 23.02	52 25 20.4
5 33 39.4	8.3	34 48.78	34 21.0	39 38.70	−22.08	+0 22.87	+11.68	−0.87	−15.20	5 35 15.59	52 35 14.5
5 36 22.7	8.5	37 32.48	37 0.5	35 58.95	−25.40	+0 22.87	+11.52	−0.89	−15.15	5 37 59.28	52 38 50.6
5 38 23.0	8.0	39 30.36	38 53.3	55 5.60	−30.33	+0 22.85	+9.84	−0.89	−14.70	5 39 57.06	51 19 37.6
5 39 27.0	6.5	40 33.78	40 6.9	46 28.20	−21.92	+0 22.85	+10.24	−0.90	−14.75	5 41 0.48	51 28 23.7
5 40 44.2	9.0	41 52.44	41 22.3	6 19.40	−24.17	+0 22.86	+10.97	−0.93	−14.85	5 42 19.16	52 8 30.8
5 42 8.2	8.5	43 15.40	42 44.9	38 27.80	−24.23	+0 22.87	+11.61	−0.95	−14.95	5 43 42.14	52 36 22.7
5 43 49.6	9.2	44 59.04	44 28.3	56 9.40	−24.56	+0 22.87	+11.08	−0.96	−14.85	5 45 25.75	52 18 40.2
5 44 49.9	9.0	46 0.52	45 32.7	20 0.35	−21.93	+0 22.89	+11.84	−0.98	−15.00	5 46 27.27	52 54 52.4
5 46 14.4	8.9	47 24.18	47 2.1	5 48.00	−17.74	+0 22.87	+11.05	−0.98	−14.80	5 47 50.86	52 9 8.2
5 50 14.3	9.2	51 24.58	51 5.2	26 25.95	−15.34	+0 22.90	+11.90	−1.04	−14.90	5 51 51.27	52 48 33.1
5 51 42.1	8.4	52 48.62	52 30.1	59 41.85	−15.15	+0 22.87	+10.25	−1.01	−14.55	5 53 15.22	51 15 16.0
5 53 1.0	7.0	54 7.78	53 50.1	40 34.85	−14.39	+0 22.87	+10.42	−1.03	−14.60	5 54 34.38	51 34 23.8
... ..	9.2	54 8.80	54 38.0	40 34.85	+23.75	+0 22.87	+10.30	−1.03	−14.60	5 54 35.40	51 35 1.8
5 54 7.7	8.2	55 17.16	55 6.2	20 49.80	−8.88	+0 22.88	+10.88	−1.04	−14.70	5 55 43.78	51 54 14.5

ZONE 276, FEBRUARY 10, 1874.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
4 11 25.4	8.3	12 23.84	11 58.8	56 37.70	-20.45	+0 28.18	+ 9.83	+0.14	-16.40	4 12 56.72	51 18 21.0
4 13 7.2	6.5	14 5.16	13 40.9	36 28.85	-19.73	+0 28.18	+10.20	+0.12	-16.40	4 14 38.04	51 38 30.8
4 15 36.3	8.3	16 36.04	16 5.1	40 42.80	-24.57	+0 28.20	+11.14	+0.10	-16.70	4 17 8.99	52 34 12.5
4 16 34.4	8.3	17 32.42	17 6.5	16 56.50	-21.34	+0 28.18	+ 9.51	+0.08	-16.40	4 18 5.24	50 58 0.6
4 17 39.9	7.8	18 38.66	18 6.1	8 28.95	-26.19	+0 28.19	+10.74	+0.07	-16.70	4 19 11.55	52 6 24.2
4 19 13.8	8.8	20 12.62	19 35.8	54 43.10	-30.73	+0 28.18	+ 9.87	+0.05	-16.50	4 20 45.44	51 20 4.7
4 21 22.9	8.8	22 23.98	21 44.1	42 1.66	-31.74	+0 28.20	+11.02	+0.03	-16.70	4 22 56.87	52 32 45.9
4 22 46.7	9.0	23 47.48	23 19.1	49 47.60	-22.67	+0 28.19	+11.25	+0.01	-16.80	4 24 20.34	52 25 9.0
4 23 34.0	7.7	24 32.54	24 18.5	30 49.55	-11.59	+0 28.17	+ 9.27	+0.01	-16.30	4 25 5.29	50 44 16.6
4 24 46.2	9.0	25 46.42	25 22.4	38 18.40	-19.07	+0 28.20	+11.47	-0.01	-16.90	4 26 19.29	52 36 41.8
4 36 1.1	8.6	37 0.84	36 25.6	49 57.85	-28.72	+0 28.18	+ 9.71	-0.13	-16.50	4 37 33.53	51 24 50.4
4 37 11.1	8.8	38 10.94	37 59.1	55 1.60	- 9.65	+0 28.18	+ 9.91	-0.14	-16.50	4 38 43.62	51 20 5.8
4 39 44.9	8.8	40 46.04	40 17.4	4 9.40	-22.95	+0 28.19	+10.95	-0.17	-16.70	4 41 18.75	52 10 45.5
4 40 47.3	8.1	41 48.18	41 20.3	42 20.60	-22.20	+0 28.20	+11.25	-0.18	-16.80	4 42 20.92	52 32 35.0
4 41 44.0	6.0	42 44.34	42 19.8	37 20.65	-19.46	+0 28.20	+11.41	-0.19	-16.80	4 43 17.07	52 37 37.8
4 43 0.5	8.8	44 1.32	43 19.3	1 22.85	-33.66	+0 28.19	+10.56	-0.21	-16.70	4 44 34.00	52 13 20.6
4 43 47.4	8.7	44 48.34	44 24.3	59 37.80	-19.22	+0 28.19	+11.12	-0.22	-16.70	4 45 21.02	52 15 20.6
4 44 39.9	5.5	45 40.44	45 20.1	35 13.45	-16.11	+0 28.20	+11.38	-0.23	-16.70	4 46 13.14	52 39 48.2
4 45 53.2	9.1	46 53.62	46 31.3	16 34.55	-18.37	+0 28.18	+ 9.52	-0.23	-16.30	4 47 26.21	50 58 23.3
4 48 15.9	6.5	49 16.54	48 40.0	17 10.55	-28.77	+0 28.20	+11.61	-0.26	-16.80	4 49 49.24	52 57 38.3
4 49 34.0	9.2	50 34.24	49 54.2	16 56.35	-32.20	+0 28.18	+ 9.19	-0.27	-16.30	4 51 6.80	50 57 47.0
4 50 28.0	9.0	51 27.84	51 0.5	42 14.00	-22.70	+0 28.17	+ 9.01	-0.28	-16.10	4 52 0.35	50 32 38.8
.....	9.3	52 22.34	52 22.8	23 9.65	+ 0.40	+0 28.19	+10.76	-0.30	-16.50	4 52 54.93	51 51 48.1
4 51 24.1	9.2	52 27.22	52 3.8	23 9.65	-18.91	+0 28.19	+10.62	-0.30	-16.50	4 52 59.81	51 52 7.5
4 53 4.1	9.3	54 3.68	53 50.3	30 51.05	-10.86	+0 28.19	+10.41	-0.31	-16.40	4 54 36.26	51 44 14.4
4 54 52.5	8.8	55 56.90	55 41.6	24 51.85	-12.19	+0 28.19	+11.90	-0.34	-16.70	4 56 29.52	52 50 13.4
4 56 23.5	9.1	57 26.54	56 53.2	12 10.20	-26.80	+0 28.20	+10.62	-0.35	-16.50	4 57 59.11	52 2 39.2
4 59 28.1	8.4	0 30.32	0 8.8	38 39.30	-17.08	+0 28.21	+11.50	-0.39	-16.60	5 1 2.90	52 36 20.4
5 12 26.8	8.8	13 30.42	13 3.8	26 11.90	-21.04	+0 28.20	+11.53	-0.51	-16.40	5 14 2.91	52 48 42.9
5 13 51.4	9.0	14 51.50	14 15.6	59 30.35	-30.03	+0 28.17	+ 8.67	-0.52	-15.70	5 15 23.80	50 15 13.2
5 15 26.5	8.8	16 25.84	15 49.0	4 52.90	-30.84	+0 28.17	+ 8.58	-0.53	-15.60	5 16 58.13	50 9 49.7
5 17 7.5	8.8	18 9.74	17 29.3	24 53.30	-33.39	+0 28.19	+ 9.26	-0.56	-15.70	5 18 42.06	50 49 47.2
5 19 21.8	9.1	20 23.72	19 38.6	2 19.15	-36.97	+0 28.19	+ 9.42	-0.59	-15.80	5 20 56.03	51 12 17.6
5 20 27.7	9.3	21 31.14	21 4.2	1 12.73	-21.56	+0 28.20	+10.86	-0.61	-16.10	5 22 3.50	52 13 40.5
5 21 53.9	8.0	22 57.54	22 14.9	41 9.85	-33.88	+0 28.21	+10.93	-0.63	-16.10	5 23 29.92	52 33 31.0
5 23 15.0	9.2	24 19.38	23 47.8	14 13.70	-24.88	+0 28.21	+11.86	-0.65	-16.30	5 24 51.77	53 0 36.8
5 24 3.2	8.8	25 6.44	24 50.9	46 23.95	-12.35	+0 28.21	+11.31	-0.66	-16.00	5 25 38.78	52 28 38.7
5 26 56.8	8.3	27 54.74	27 19.4	47 31.65	-29.40	+0 28.18	+ 8.80	-0.65	-15.40	5 28 26.95	50 27 11.8
5 27 54.2	9.1	28 57.68	28 30.7	15 9.95	-22.71	+0 28.17	+ 8.29	-0.65	-15.30	5 29 29.85	49 59 39.7
5 29 6.2	7.7	30 9.40	29 32.9	44 59.00	-29.08	+0 28.21	+10.98	-0.71	-16.00	5 30 41.70	52 29 46.2
5 30 44.7	8.3	31 48.02	31 11.9	38 58.45	-28.68	+0 28.21	+11.28	-0.73	-15.95	5 32 20.31	52 35 47.4
5 31 46.7	7.1	32 50.72	32 24.1	49 32.10	-21.22	+0 28.21	+11.30	-0.73	-15.90	5 33 23.00	52 25 21.2
5 33 39.4	8.2	34 43.34	34 7.6	39 30.80	-28.37	+0 28.21	+11.34	-0.76	-15.90	5 35 15.60	52 35 15.2
5 36 22.7	8.9	37 26.98	36 43.5	35 47.00	-34.53	+0 28.21	+11.05	-0.78	-15.80	5 37 59.23	52 38 52.4
5 38 23.0	7.9	39 24.86	38 51.7	55 6.35	-27.14	+0 28.20	+ 9.69	-0.78	-15.40	5 39 57.02	51 19 39.3
5 39 27.0	6.4	40 28.28	39 58.6	46 24.35	-24.20	+0 28.20	+ 9.97	-0.79	-15.45	5 41 0.44	51 28 24.4
5 40 44.2	...	41 46.98	41 25.4	6 25.20	-17.34	+0 28.21	+10.85	-0.82	-15.55	5 42 19.16	52 8 31.0
5 42 8.2	8.6	43 9.98	42 27.7	38 14.45	-33.61	+0 28.22	+11.15	-0.84	-15.60	5 43 42.18	52 36 25.6
5 43 49.6	9.2	44 53.70	44 11.7	55 58.95	-33.58	+0 28.21	+10.62	-0.85	-15.50	5 45 25.86	52 18 40.6
5 44 49.9	9.1	45 55.18	45 36.1	20 5.15	-15.07	+0 28.23	+11.71	-0.88	-15.65	5 46 27.37	52 54 53.8
5 46 14.4	8.9	47 18.86	46 50.9	5 39.80	-22.48	+0 28.21	+10.74	-0.88	-15.40	5 47 50.98	52 9 10.9
5 47 42.1	8.5	48 47.60	48 6.9	50 30.50	-32.48	+0 28.22	+10.79	-0.90	-15.40	5 49 19.73	52 24 10.1
5 48 39.2	8.8	49 44.84	49 21.0	53 25.70	-19.02	+0 28.22	+11.22	-0.91	-15.35	5 50 16.95	52 21 28.7

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
5 50 14.3	9.5	51 19.10	50 48.1	26 14.70	-24.51	+0 28.23	+11.49	-0.93	-15.40	5 51 51.23	52 48 34.3
5 51 42.1	8.0	52 43.26	52 11.0	59 28.95	-26.45	+0 28.20	+ 9.89	-0.91	-14.95	5 53 15.29	51 15 16.9
5 53 1.0	6.5	54 2.36	53 25.1	40 16.60	-30.33	+0 28.20	+ 9.90	-0.93	-15.00	5 54 34.39	51 34 25.3
. . .	9.1	54 3.36	54 12.9	40 16.60	+ 7.72	+0 28.20	+10.25	-0.93	-15.00	5 54 35.39	51 35 3.7
5 54 7.7	...	55 11.78	54 51.9	20 39.95	-16.06	+0 28.21	+10.56	-0.95	-15.05	5 55 43.82	51 54 16.6
ZONE 277, FEBRUARY 11, 1874.											
4 19 13.8	9.0	20 11.94	19 53.8	54 58.50	-15.12	+0 28.82	+ 9.95	+0.07	-16.50	4 20 45.42	51 20 5.1
4 21 22.9	9.0	22 23.22	21 52.5	42 8.45	-24.43	+0 28.83	+11.31	+0.05	-16.90	4 22 56.76	52 32 46.7
4 22 20.6	8.8	23 20.62	23 9.7	53 25.35	- 8.71	+0 28.83	+11.34	+0.04	-16.90	4 23 54.14	52 21 45.4
4 23 34.0	7.7	24 31.84	24 0.4	30 33.75	-26.00	+0 28.81	+ 9.14	+0.03	-16.30	4 25 5.25	50 44 18.1
4 24 46.2	8.9	25 45.64	25 13.3	38 11.40	-25.66	+0 28.83	+11.43	+0.02	-16.90	4 26 19.17	52 36 42.3
4 36 1.1	8.8	37 0.24	36 33.1	50 5.20	-22.11	+0 28.82	+ 9.96	-0.11	-16.60	4 37 33.59	51 24 50.0
4 37 11.1	9.0	38 10.30	37 46.2	54 52.50	-19.70	+0 28.81	+10.19	-0.13	-16.50	4 38 43.62	51 20 5.3
4 39 44.9	8.5	40 45.30	40 14.7	4 8.05	-24.55	+0 28.82	+11.03	-0.15	-16.80	4 41 18.66	52 10 45.4
4 40 47.3	8.5	41 47.48	41 20.9	42 22.40	-21.16	+0 28.83	+11.37	-0.16	-16.90	4 42 20.87	52 32 34.5
4 41 44.0	6.7	42 43.62	42 22.7	37 23.00	-16.60	+0 28.83	+11.55	-0.17	-16.90	4 43 17.00	52 37 38.5
4 43 0.5	8.8	44 0.60	43 20.9	1 24.60	-31.82	+0 28.82	+10.72	-0.18	-16.70	4 44 33.94	52 13 21.0
4 43 47.4	8.5	44 47.75	44 57.5	0 3.35	+ 7.85	+0 28.82	+11.08	-0.20	-16.70	4 45 21.08	52 15 22.2
4 45 53.2	9.1	46 52.78	46 16.6	16 22.00	-30.46	+0 28.81	+ 9.37	-0.21	-16.40	4 47 26.02	50 58 23.6
4 48 15.9	6.5	49 15.82	48 43.2	17 13.80	-25.69	+0 28.83	+11.76	-0.24	-16.90	4 49 49.17	52 57 38.3
4 49 34.0	9.2	50 33.52	49 57.9	17 0.25	-29.33	+0 28.81	+ 9.37	-0.26	-16.40	4 51 6.72	50 57 46.2
4 50 28.0	8.8	51 27.12	51 5.4	42 19.35	-18.04	+0 28.80	+ 9.18	-0.26	-16.10	4 52 0.28	50 32 38.4
.....	9.3	52 21.54	52 17.0	23 6.95	- 3.64	+0 28.82	+10.84	-0.28	-16.60	4 52 54.78	51 51 48.8
4 51 24.1	9.2	52 26.50	52 0.5	23 6.95	-21.01	+0 28.82	+10.67	-0.28	-16.60	4 52 59.74	51 52 6.3
4 54 52.5	8.9	55 56.16	55 26.6	24 40.10	-23.39	+0 28.83	+11.82	-0.32	-16.80	4 56 29.44	52 50 13.9
4 56 23.5	9.0	57 25.96	56 52.8	12 10.95	-26.71	+0 28.82	+10.73	-0.33	-16.60	4 57 59.17	52 2 38.7
4 58 9.4	9.7	59 11.22	58 44.0	41 19.15	-21.63	+0 28.83	+11.37	-0.35	-16.70	4 59 44.46	52 33 36.0
4 59 28.1	8.6	0 29.56	59 55.9	38 29.40	-26.77	+0 28.83	+11.42	-0.37	-16.70	5 1 2.78	52 36 20.6
5 2 11.6	9.0	3 15.34	2 35.9	22 48.95	-31.12	+0 28.83	+11.58	-0.40	-16.70	5 3 48.55	52 51 56.6
5 29 36.6	6.2	30 38.96	30 4.0	49 6.90	-27.29	+0 28.84	+12.46	-0.71	-16.30	5 31 11.95	53 25 41.4
5 30 34.1	9.0	31 37.90	31 12.8	48 4.55	-19.56	+0 28.84	+12.57	-0.72	-16.30	5 32 10.88	53 26 51.5
5 31 48.8	9.1	32 55.68	32 20.7	50 57.70	-26.65	+0 28.86	+13.33	-0.75	-16.50	5 33 28.72	54 23 51.7
5 33 45.2	8.5	34 48.56	34 21.4	58 49.95	-21.28	+0 28.84	+12.38	-0.75	-16.20	5 35 21.50	53 16 4.0
5 36 42.2	9.1	37 47.34	38 20.5	30 18.75	+25.69	+0 28.85	+12.63	-0.79	-16.20	5 38 20.29	53 45 22.2
5 36 47.4	8.7	37 52.30	37 4.2	30 18.75	-37.22	+0 28.85	+12.29	-0.80	-16.20	5 38 25.24	53 44 18.9
5 37 53.0	8.8	38 57.84	38 48.2	47 1.20	- 7.48	+0 28.84	+12.66	-0.80	-16.10	5 39 30.75	53 28 6.6
5 39 0.3	8.9	40 3.63	39 51.8	15 43.75	- 9.08	+0 28.85	+13.18	-0.82	-16.20	5 40 36.56	53 59 22.7
5 40 10.2	8.7	41 14.36	40 51.6	28 24.45	-17.63	+0 28.85	+12.98	-0.83	-16.10	5 41 47.27	53 46 33.3
5 42 43.1	9.2	43 48.08	43 22.4	17 31.90	-19.56	+0 28.85	+13.10	-0.86	-16.10	5 44 20.97	53 57 23.8
5 43 50.7	8.0	44 55.34	44 44.1	49 13.95	- 8.73	+0 28.84	+12.75	-0.86	-15.90	5 45 28.19	53 25 52.3
5 44 49.9	8.6	45 52.48	46 11.3	56 53.50	+14.60	+0 28.84	+12.41	-0.87	-15.80	5 46 25.31	53 18 35.8
5 47 45.2	8.8	48 49.38	48 26.7	42 42.00	-17.65	+0 28.84	+12.66	-0.91	-15.80	5 49 22.19	53 32 15.0
5 48 39.2	9.0	49 44.10	49 18.3	53 24.70	-20.61	+0 28.84	+11.30	-0.88	-15.50	5 50 16.86	52 21 28.2
5 50 14.3	9.4	51 18.36	50 45.1	26 12.80	-26.33	+0 28.84	+11.60	-0.91	-15.60	5 51 51.12	52 48 34.5
5 51 21.8	7.6	52 26.32	52 0.5	42 46.15	-20.06	+0 28.84	+12.63	-0.94	-15.70	5 52 59.10	53 32 8.2
5 52 33.4	8.8	53 36.78	53 0.7	40 53.55	-28.05	+0 28.84	+12.39	-0.95	-15.70	5 54 9.55	53 33 52.5
5 58 27.9	8.9	59 32.52	59 37.8	24 28.20	+ 4.24	+0 28.84	+12.13	-0.89	-15.60	6 0 5.30	52 50 49.5
6 0 3.3	...	1 9.52	1 21.1	24 10.40	+ 8.95	+0 28.85	+13.24	-1.04	-15.50	6 1 42.23	53 51 13.0

ZONE 278, FEBRUARY 12, 1874.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
5 18 12.6	7.7	19 13.38	18 49.9	55 24.65	-19.68	+0 29.69	+12.40	-0.55	-16.40	5 19 47.36	53 19 32.5
5 19 30.3	9.0	20 32.28	19 59.3	59 55.20	-25.84	+0 29.69	+12.14	-0.57	-16.60	5 21 6.24	53 14 55.2
5 21 20.4	9.3	22 24.54	21 43.6	5 4.10	-31.33	+0 29.70	+13.08	-0.61	-16.80	5 22 58.53	54 9 41.4
5 22 30.7	9.5	23 33.78	22 59.5	4 59.25	-26.91	+0 29.69	+12.04	-0.61	-16.50	5 24 7.70	53 9 49.8
5 24 42.0	6.0	25 45.92	25 7.9	54 14.00	-28.98	+0 29.70	+13.55	-0.65	-16.70	5 26 19.88	54 20 34.1
5 26 25.4	8.7	27 28.84	26 57.5	21 37.95	-23.55	+0 29.72	+14.20	-0.67	-16.90	5 28 2.84	54 53 15.9
5 27 42.4	9.3	28 47.48	28 7.8	27 16.25	-30.68	+0 29.76	+12.79	-0.67	-16.50	5 29 21.45	53 47 29.3
5 27 42.4	9.4	28 48.23	28 18.3	27 16.25	-23.19	+0 29.76	+12.98	-0.67	-16.50	5 29 22.20	53 47 37.0
5 29 36.6	6.3	30 38.04	30 4.4	49 10.35	-26.19	+0 29.68	+12.61	-0.69	-16.40	5 31 11.89	53 25 39.5
5 30 34.1	8.8	31 37.06	31 11.4	48 4.65	-20.03	+0 29.68	+12.68	-0.70	-16.40	5 32 10.90	53 26 51.3
5 31 48.8	9.1	32 54.78	32 24.4	51 1.80	-23.15	+0 29.70	+13.64	-0.73	-16.60	5 33 28.68	54 23 51.7
5 33 45.2	8.5	34 47.58	34 11.5	58 42.85	-28.25	+0 29.68	+12.34	-0.73	-16.30	5 35 21.38	53 16 4.4
5 34 37.6	9.8	35 41.66	35 31.6	30 42.50	-7.81	+0 29.69	+13.01	-0.75	-16.50	5 36 15.48	53 44 25.6
5 36 42.2	9.3	37 46.26	38 23.7	30 23.50	+28.94	+0 29.69	+12.68	-0.77	-16.30	5 38 20.07	53 45 21.0
5 36 47.4	8.8	37 51.40	37 8.3	30 23.50	-33.35	+0 29.69	+12.54	-0.78	-16.30	5 38 25.20	53 44 18.6
5 37 53.0	8.7	38 56.94	39 14.2	47 23.10	+13.47	+0 29.68	+12.75	-0.78	-16.20	5 39 30.71	53 28 6.0
5 39 0.3	8.7	40 2.70	40 28.2	16 14.10	+19.62	+0 29.68	+13.21	-0.80	-16.30	5 40 36.48	53 59 21.4
5 40 10.2	8.6	41 13.52	41 1.1	28 32.85	-9.59	+0 29.68	+13.22	-0.81	-16.20	5 41 47.28	53 46 33.5
5 42 43.1	8.9	43 47.18	43 44.5	17 49.95	-2.08	+0 29.68	+13.43	-0.84	-16.20	5 44 20.92	53 57 23.9
5 43 50.7	7.7	44 54.36	44 41.9	49 13.50	-9.74	+0 29.67	+12.87	-0.84	-16.00	5 45 28.06	53 25 52.2
5 44 49.9	8.3	45 51.64	45 39.4	56 29.20	-9.54	+0 29.67	+12.57	-0.85	-16.00	5 46 25.32	53 18 36.3
5 47 45.2	9.0	48 48.60	48 8.3	42 29.85	-31.33	+0 29.67	+12.51	-0.88	-15.90	5 49 22.27	53 32 13.6
5 48 39.2	9.3	49 43.22	49 29.4	53 34.60	-11.03	+0 29.67	+11.55	-0.86	-15.60	5 50 16.83	52 21 28.5
5 50 14.3	9.5	51 17.64	50 46.1	26 15.35	-24.91	+0 29.68	+11.76	-0.89	-15.60	5 51 51.26	52 48 33.9
5 51 21.8	7.6	52 25.50	51 53.7	42 41.80	-24.72	+0 29.67	+12.67	-0.92	-15.80	5 52 59.13	53 32 8.3
5 52 33.4	8.8	53 35.84	53 1.3	40 55.25	-26.81	+0 29.66	+12.56	-0.93	-15.80	5 54 9.45	53 33 52.5
5 56 33.8	8.5	57 37.24	57 53.0	6 20.60	+12.40	+0 29.65	+12.35	-0.97	-15.60	5 58 10.78	53 9 6.0
5 58 27.9	8.9	59 31.62	58 50.0	23 51.10	-32.87	+0 29.67	+12.76	-0.87	-15.70	6 0 5.25	52 50 50.4
5 59 8.6	9.0	0 12.66	0 4.5	43 58.85	-6.38	+0 29.66	+12.91	-1.00	-15.50	6 0 46.20	53 31 9.4
6 0 3.3	8.6	1 8.72	0 57.6	23 52.40	-8.57	+0 29.67	+13.36	-1.02	-15.60	6 1 42.27	53 51 13.9

ZONE 279, FEBRUARY 14, 1874.

5 44 35.3	8.0	45 34.98	45 23.5	43 27.85	-8.94	+0 31.28	+12.63	-0.81	-16.20	5 46 10.33	53 31 38.0
5 45 44.0	9.2	46 47.30	46 34.7	16 5.40	-9.69	+0 31.28	+13.01	-0.83	-16.30	5 47 22.66	53 58 59.9
5 47 59.6	9.1	49 1.88	48 29.8	57 28.75	-25.10	+0 31.27	+12.06	-0.84	-16.10	5 49 37.17	53 17 20.2
5 49 15.4	8.6	50 21.62	49 40.6	42 2.95	-31.10	+0 31.29	+13.29	-0.88	-16.30	5 50 56.98	54 32 40.9
5 49 48.8	8.7	50 52.06	50 50.4	42 13.85	-1.29	+0 31.29	+13.78	-0.88	-16.30	5 51 27.42	54 33 0.3
5 51 21.8	6.5	52 23.80	51 48.8	42 38.65	-27.21	+0 31.28	+12.30	-0.87	-16.00	5 52 59.09	53 32 8.2
5 52 57.1	9.0	54 0.10	53 24.7	24 47.10	-27.34	+0 31.28	+12.78	-0.89	-16.10	5 54 35.39	53 49 59.9
5 55 27.2	9.0	56 31.52	55 48.0	32 51.10	-32.89	+0 31.29	+13.54	-0.95	-16.20	5 57 6.82	54 41 50.8
5 56 14.7	8.9	57 20.20	57 5.1	45 27.45	-11.47	+0 31.29	+13.58	-0.96	-16.10	5 57 55.47	54 29 35.9
5 57 26.8	8.6	58 27.68	58 1.3	48 49.55	-21.06	+0 31.28	+11.26	-0.92	-15.50	5 59 2.85	52 26 2.4
5 58 27.9	9.0	59 29.88	59 3.9	24 2.70	-20.55	+0 31.29	+11.75	-0.94	-15.60	6 0 5.06	52 50 50.1
5 59 17.2	8.9	0 21.30	59 56.9	23 8.60	-18.37	+0 31.30	+14.08	-1.00	-16.10	6 0 56.57	54 51 48.1
6 0 22.8	8.3	1 27.34	1 2.1	29 22.90	-19.02	+0 31.29	+14.01	-1.01	-16.20	6 2 2.58	54 45 32.9
6 1 44.8	8.2	2 48.08	2 7.4	31 53.55	-30.83	+0 31.29	+13.54	-1.02	-16.00	6 3 23.31	54 42 50.1
6 4 32.5	9.1	5 35.48	4 55.0	24 41.70	-31.26	+0 31.28	+12.67	-1.03	-15.70	6 6 10.63	53 50 0.7
6 6 19.3	7.3	7 21.52	6 46.4	32 5.45	-27.18	+0 31.28	+12.48	-1.05	-15.60	6 7 56.64	53 42 40.8
6 7 15.2	9.2	8 20.80	8 7.9	2 19.50	-9.87	+0 31.29	+13.36	-1.08	-15.70	6 8 55.93	54 12 44.7
6 8 6.0	8.5	9 9.56	9 16.9	57 23.50	+5.57	+0 31.29	+13.49	-1.08	-15.70	6 9 44.70	54 17 56.2

R. A. 1855.o. According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.o.	Mean Dec. 1875.o.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	° "	"	m s	"	s	"	h m s	° ' "
6 8 24.7	7.0	9 28.12	9 37.1	57 23.50	+ 6.87	+0 31.29	+13.49	-1.08	-15.70	6 10 3.26	54 17 57.5
6 20 11.0	8.2	21 17.92	20 47.9	22 8.45	-22.58	+0 31.30	+13.97	-1.22	-15.40	6 21 52.96	54 52 42.8
6 21 38.3	9.0	22 41.36	22 10.5	41 10.25	-23.44	+0 31.29	+13.50	-1.22	-15.20	6 23 16.37	54 33 39.8
6 23 19.9	8.5	24 22.96	23 42.1	3 21.45	-31.31	+0 31.28	+12.99	-1.24	-15.10	6 24 57.91	54 11 20.2
6 23 52.7	8.6	24 56.34	24 48.3	34 10.65	- 6.05	+0 31.29	+14.04	-1.25	-15.20	6 25 31.33	54 40 57.1
6 25 29.9	8.4	26 32.34	26 0.6	40 23.75	-24.62	+0 31.28	+12.26	-1.24	-14.80	6 27 7.25	53 34 23.9
6 27 18.8	9.0	28 23.70	27 55.3	12 56.10	-21.83	+0 31.28	+13.02	-1.27	-14.80	6 28 58.61	54 1 55.0
6 27 36.5	8.8	28 39.92	28 55.8	12 38.15	+12.21	+0 31.28	+13.15	-1.27	-14.80	6 29 14.83	54 2 47.1
6 29 21.8	8.3	30 22.54	29 45.0	44 16.00	-29.25	+0 31.28	+12.32	-1.27	-14.60	6 30 57.41	53 30 27.0
6 30 38.2	9.4	31 40.25	31 15.8	13 20.85	-19.12	+0 31.27	+11.96	-1.27	-14.40	6 32 15.08	53 1 32.0
6 31 51.4	9.5	32 57.16	32 39.5	15 27.50	-13.61	+0 31.28	+12.97	-1.32	-14.60	6 33 32.08	53 59 31.5
6 33 34.3	9.2	34 37.68	34 13.7	16 15.95	-18.02	+0 31.30	+14.13	-1.37	-14.80	6 35 12.57	54 58 39.5
6 35 4.4	9.0	36 7.72	35 30.8	47 36.10	-28.06	+0 31.46	+13.37	-1.29	-15.20	6 36 42.81	54 27 8.0
ZONE 280, FEBRUARY 17, 1874.											
5 44 35.3	8.0	45 32.62	45 41.6	43 44.20	+ 7.00	+0 33.49	+12.90	-0.74	-16.50	5 46 10.25	53 31 37.3
5 45 44.0	8.9	46 45.06	46 28.9	16 2.30	-12.46	+0 33.49	+13.19	-0.76	-16.60	5 47 22.70	53 58 59.8
5 47 59.6	9.2	48 59.64	48 27.7	57 30.20	-24.95	+0 33.49	+12.29	-0.77	-16.40	5 49 37.22	53 17 18.6
5 49 15.4	8.7	50 19.36	49 53.0	42 15.50	-20.04	+0 33.50	+13.84	-0.81	-16.70	5 50 57.00	54 32 39.3
5 49 48.8	8.9	50 49.76	50 40.6	42 8.75	- 6.98	+0 33.51	+14.01	-0.82	-16.70	5 51 27.40	54 32 59.2
5 51 21.8	7.0	52 21.48	51 47.7	42 40.70	-26.24	+0 33.50	+12.55	-0.81	-16.40	5 52 59.05	53 32 6.7
5 52 57.1	9.2	53 57.90	53 25.3	24 50.55	-25.18	+0 33.52	+13.08	-0.84	-16.40	5 54 35.48	53 49 58.3
5 55 27.2	8.8	56 29.06	55 53.0	32 56.75	-27.30	+0 33.52	+13.94	-0.88	-16.60	5 57 6.66	54 41 50.4
5 56 14.7	8.8	57 17.80	56 58.6	45 26.70	-14.59	+0 33.53	+13.76	-0.89	-16.50	5 57 55.38	54 29 33.0
5 57 26.8	8.7	58 25.38	58 3.6	48 54.65	-17.39	+0 33.50	+11.53	-0.84	-15.90	5 59 2.85	52 26 0.6
5 58 27.9	9.0	59 27.64	59 3.2	24 5.65	-19.28	+0 33.51	+12.01	-0.86	-16.00	6 0 5.12	52 50 48.0
5 59 17.2	8.6	0 18.98	59 59.5	23 14.45	-14.68	+0 33.52	+14.39	-0.93	-16.50	6 0 56.54	54 51 45.6
6 0 22.8	8.6	1 25.02	1 2.9	29 27.35	-16.68	+0 33.53	+14.32	-0.92	-16.60	6 2 2.59	54 45 30.4
6 1 44.8	8.6	2 45.72	2 8.0	31 56.40	-28.49	+0 33.52	+13.84	-0.93	-16.40	6 3 23.27	54 42 49.2
6 2 20.4	6.5	3 16.34	3 25.0	3 12.95	+ 7.13	+0 33.49	+ 9.08	-0.88	-15.40	6 3 53.68	51 12 4.4
6 2 58.3	8.8	3 53.36	3 34.1	3 12.95	-15.82	+0 33.49	+ 9.00	-0.88	-15.40	6 4 30.70	51 11 41.3
6 4 32.5	9.4	5 33.32	4 59.2	24 48.25	-26.32	+0 33.51	+13.06	-0.96	-16.00	6 6 10.77	53 49 58.8
6 6 19.3	7.8	7 19.24	6 51.1	32 12.55	-21.76	+0 33.51	+12.82	-0.98	-15.90	6 7 56.66	53 42 38.8
6 7 15.2	8.8	8 18.50	8 17.4	2 29.55	- 0.85	+0 33.51	+13.63	-1.00	-16.00	6 8 55.93	54 12 43.4
6 8 6.0	8.8	9 7.28	9 5.9	57 17.90	- 1.07	+0 33.52	+13.73	-1.00	-15.60	6 9 44.73	54 17 55.2
6 8 24.7	6.8	9 25.90	9 29.4	57 17.90	+ 2.67	+0 33.52	+13.72	-1.00	-15.60	6 10 3.35	54 17 58.9
6 20 11.0	8.5	21 15.70	21 0.8	22 21.10	-11.22	+0 33.52	+14.39	-1.16	-15.90	6 21 53.02	54 52 41.2
6 21 38.3	9.0	22 39.20	22 3.0	41 6.75	-27.46	+0 33.53	+13.64	-1.17	-15.60	6 23 16.50	54 33 38.7
6 23 19.9	8.5	24 20.68	23 46.1	3 25.90	-26.54	+0 33.51	+13.38	-1.17	-15.50	6 24 57.93	54 11 20.2
6 23 52.7	8.1	24 54.24	24 41.5	34 7.45	- 9.61	+0 33.53	+14.30	-1.19	-15.60	6 25 31.53	54 40 56.3
6 25 29.9	8.3	26 29.98	26 0.2	40 24.30	-23.15	+0 33.50	+12.52	-1.18	-15.20	6 27 7.17	53 34 24.4
6 27 18.8	8.8	28 21.60	27 38.3	12 44.55	-33.26	+0 33.53	+12.97	-1.21	-15.20	6 28 58.82	54 1 54.3
6 27 36.5	8.5	28 37.78	29 1.3	12 44.55	+18.05	+0 33.53	+13.32	-1.21	-15.20	6 29 15.00	54 2 46.0
6 29 21.8	6.9	30 20.26	29 48.2	44 20.00	-24.98	+0 33.51	+12.67	-1.21	-15.00	6 30 57.42	53 30 26.9
6 30 38.2	8.8	31 37.94	31 8.9	13 17.65	-22.82	+0 33.51	+12.11	-1.21	-14.80	6 32 15.07	53 1 30.9
6 31 51.4	9.2	32 54.88	32 29.8	15 22.40	-19.30	+0 33.52	+13.09	-1.26	-15.00	6 33 32.10	53 59 30.4
6 33 34.3	8.9	34 35.42	33 53.7	16 2.45	-31.31	+0 33.54	+14.04	-1.31	-15.20	6 35 12.61	54 58 38.9
ZONE 281, FEBRUARY 18, 1874.											
5 37 9.6	8.4	39 11.10	38 37.1	15 46.60	-26.15	-0 25.82	+13.06	-0.64	-17.00	5 38 49.54	53 59 3.4

R. A. 1855.0 According to B. D.			Obs. Magn.	Mean of R. A. Wires.		Mean of Dec. Wires.		Mean of Circle Readings.		Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.					
							R. A.	Dec.	R. A.		Dec.										
h	m	s		m	s	m	s	'	"	"	m	s	s	"	h	m	s	°	'	"	
5	39	11.9	9.0	41	9.38	40	28.7	48	17.00	-31.72	-0	25.81	+12.45	-0.66	-16.80	5	40	47.78	53	26	26.8
5	40	10.2	8.7	42	9.02	41	42.5	28	21.95	-20.49	-0	25.82	+13.12	-0.67	-16.80	5	41	47.42	53	46	33.7
5	41	16.7	9.2	43	13.86	42	46.9	57	18.25	-21.11	-0	25.81	+12.48	-0.68	-16.70	5	42	52.23	53	17	36.1
5	42	43.1	9.0	44	42.72	44	6.9	17	26.80	-27.56	-0	25.81	+13.10	-0.70	-16.80	5	44	21.11	53	57	21.5
5	43	54.3	8.9	45	53.42	45	30.6	49	37.40	-17.77	-0	25.80	+12.83	-0.71	-16.70	5	45	31.78	53	25	20.4
5	45	14.4	8.7	47	15.96	46	39.1	30	57.45	-27.78	-0	25.80	+13.90	-0.74	-17.00	5	46	54.38	54	43	51.0
5	45	40.2	8.8	47	40.72	48	6.1	26	21.15	+19.15	-0	25.78	+14.26	-0.75	-17.00	5	47	19.15	54	49	14.6
5	47	37.0	3.5	49	35.98	48	55.5	58	24.45	-30.94	-0	25.80	+13.48	-0.76	-16.80	5	49	14.35	54	16	20.4
5	48	38.7	9.1	50	39.08	50	18.0	26	5.35	-15.91	-0	25.78	+14.32	-0.79	-16.50	5	50	17.48	54	48	55.6
5	49	15.4	8.9	51	18.76	51	8.3	42	28.65	-7.79	-0	25.80	+14.14	-0.79	-16.80	5	50	57.12	54	32	39.8
5	49	48.8	8.6	51	49.18	52	4.7	42	28.65	+11.76	-0	25.80	+14.11	-0.79	-16.80	5	51	27.54	54	32	59.4
5	51	34.2	9.2	53	33.60	52	54.3	2	38.05	-30.79	-0	25.81	+12.17	-0.79	-16.40	5	53	11.86	53	12	5.7
5	52	33.4	8.4	54	31.28	54	5.9	41	3.05	-19.74	-0	25.81	+12.72	-0.81	-16.50	5	54	9.54	53	33	52.1
5	53	19.3	9.1	55	19.76	55	6.4	50	36.25	-10.20	-0	25.80	+13.82	-0.83	-16.70	5	54	58.07	54	24	29.3
5	56	6.8	8.6	58	7.74	57	36.9	19	24.65	-23.15	-0	25.78	+14.53	-0.87	-16.80	5	57	46.07	54	55	28.3
5	58	43.2	8.8	0	41.36	0	1.2	11	27.15	-30.87	-0	25.79	+13.07	-0.89	-16.50	6	0	19.59	54	3	16.7
6	1	0.5	8.9	3	0.88	2	26.0	14	46.15	-26.83	-0	25.80	+13.34	-0.91	-16.40	6	2	39.08	54	0	1.9
6	1	58.4	8.7	3	59.82	3	29.9	7	1.70	-22.92	-0	25.79	+13.40	-0.92	-16.40	6	3	38.03	54	7	50.3
6	4	29.7	8.8	6	30.64	5	42.6	10	9.65	-36.84	-0	25.80	+12.83	-0.95	-16.20	6	6	8.81	54	4	27.8
6	6	19.3	8.0	8	18.52	8	29.3	32	43.95	+8.36	-0	25.79	+10.82	-0.95	-16.10	6	7	56.67	53	42	36.6
6	6	41.4	9.2	8	41.78	8	0.9	32	43.95	-31.67	-0	25.79	+10.38	-0.96	-16.10	6	8	19.92	53	41	56.1
6	8	6.0	9.0	10	6.54	9	37.4	56	56.95	-22.21	-0	25.79	+13.60	-0.99	-16.20	6	9	44.69	54	17	55.7
6	8	24.7	7.0	10	25.12	9	57.8	56	56.95	-20.84	-0	25.79	+13.63	-0.99	-16.20	6	10	3.27	54	17	57.1
6	9	49.5	9.1	11	50.12	11	16.1	44	58.15	-25.83	-0	25.78	+13.65	-1.02	-16.20	6	11	28.26	54	29	50.7
6	10	59.2	8.9	12	58.90	12	30.1	6	1.40	-22.07	-0	25.80	+13.36	-1.02	-16.00	6	12	37.00	54	8	51.0
6	11	42.8	8.6	13	43.54	13	32.6	13	45.30	-8.38	-0	25.79	+13.58	-1.03	-15.90	6	13	21.65	54	1	21.0
6	13	57.8	9.2	16	0.18	15	19.1	39	13.50	-31.15	-0	25.78	+13.91	-1.06	-16.00	6	15	38.30	54	35	30.1
6	15	33.7	8.7	17	31.98	16	43.3	15	50.45	-38.37	-0	25.79	+11.59	-1.04	-15.60	6	17	9.99	52	58	44.0
6	16	21.8	8.5	18	22.50	18	3.4	17	1.60	-14.35	-0	25.77	+14.56	-1.10	-16.10	6	18	0.60	54	57	59.1
6	17	23.2	8.7	19	24.04	18	56.7	51	10.55	-20.79	-0	25.77	+13.71	-1.10	-15.90	6	19	2.10	54	23	43.0
6	20	11.0	8.9	22	15.02	21	38.9	22	6.00	-27.17	-0	25.76	+14.23	-1.14	-15.90	6	21	53.08	54	52	41.4
6	35	4.4	8.7	37	4.64	36	14.7	47	27.35	-37.95	-0	25.77	+13.41	-1.29	-15.20	6	36	42.50	54	27	7.9
6	43	14.0	9.0	45	16.92	44	33.9	28	22.45	-33.13	-0	25.75	+14.06	-1.38	-14.90	6	44	54.72	54	46	17.9
6	44	33.2	9.1	46	33.16	45	49.9	51	7.95	-32.98	-0	25.77	+13.42	-1.38	-14.70	6	46	10.91	54	23	32.0
6	45	25.5	8.4	47	25.48	47	9.2	48	45.60	-12.40	-0	25.76	+14.06	-1.39	-14.70	6	47	3.23	54	26	15.5
6	46	23.9	8.9	48	25.32	48	6.9	34	28.35	-13.92	-0	25.76	+14.40	-1.41	-14.70	6	48	3.06	54	40	31.4
6	47	29.4	8.8	49	29.68	49	8.1	58	49.10	-16.50	-0	25.75	+13.82	-1.41	-14.60	6	49	7.41	54	16	7.6
6	48	35.4	8.7	50	36.70	50	16.8	37	10.85	-15.07	-0	25.76	+14.18	-1.43	-14.60	6	50	14.42	54	37	47.5
6	49	52.8	9.1	51	52.80	51	29.4	52	6.70	-17.83	-0	25.75	+13.83	-1.44	-14.40	6	51	30.50	54	22	48.6
6	51	14.9	8.1	53	15.78	52	37.4	1	15.80	-29.37	-0	25.76	+13.33	-1.44	-14.10	6	52	53.46	54	13	27.7
6	54	42.7	9.2	56	43.68	56	10.7	47	22.75	-25.10	-0	25.75	+13.80	-1.49	-14.30	6	56	21.33	54	27	25.0

ZONE 282, FEBRUARY 24, 1874.

5	37	9.6	8.5	39	6.20	38	35.6	15	46.60	-23.54	-0	20.92	+13.14	-0.49	-17.40	5	38	49.69	53	59	4.4
5	39	11.9	9.0	41	4.48	40	35.9	48	25.35	-22.29	-0	20.93	+12.74	-0.50	-17.30	5	40	47.92	53	26	26.4
5	40	10.2	8.4	42	3.96	41	44.5	28	25.60	-15.07	-0	20.92	+13.25	-0.52	-17.30	5	41	47.41	53	46	33.8
5	41	16.7	9.2	43	8.88	42	48.6	57	21.35	-15.88	-0	20.93	+12.63	-0.52	-17.20	5	42	52.29	53	17	36.6
5	42	43.1	9.0	44	37.58	44	7.8	17	28.40	-22.94	-0	20.92	+13.24	-0.55	-17.30	5	44	21.01	53	57	22.9
5	43	54.3	8.8	45	48.62	45	25.2	49	34.45	-18.24	-0	20.93	+12.88	-0.55	-17.20	5	45	32.01	53	25	21.2
5	45	14.4	8.5	47	11.12	46	34.4	30	52.90	-27.72	-0	20.91	+13.99	-0.59	-17.50	5	46	54.58	54	43	53.9
5	45	40.2	9.0	47	35.78	47	51.6	26	14.00	+11.91	-0	20.91	+14.36	-0.59	-17.50	5	47	19.24	54	49	12.8
5	47	37.0	5.0	49	30.90	48	58.3	58	28.65	-24.90	-0	20.92	+13.65	-0.61	-17.30	5	49	14.30	54	16	20.7
5	48	38.7	9.0	50	34.20	50	11.6	26	0.95	-17.03	-0	20.91	+14.23	-0.64	-17.00	5	50	17.62	54	48	57.0

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
5 49 15.4	9.0	51 13.86	50 59.8	42 24.25	-10.70	-0 20.92	+14.14	-0.64	-17.40	5 50 57.25	54 32 39.4
5 49 48.8	8.8	51 44.16	51 58.7	42 24.25	+11.00	-0 20.92	+14.14	-0.64	-17.40	5 51 27.55	54 33 1.2
5 51 34.2	9.2	53 28.58	52 59.8	2 45.50	-22.55	-0 20.93	+12.42	-0.64	-17.00	5 53 11.87	53 12 4.9
5 52 33.4	8.7	54 26.36	54 7.0	41 4.15	-15.07	-0 20.93	+12.84	-0.66	-17.00	5 54 9.65	53 33 54.0
5 53 19.3	9.1	55 15.04	54 59.1	50 30.95	-12.11	-0 20.92	+13.81	-0.68	-17.20	5 54 58.38	54 24 30.9
5 56 6.8	8.5	58 2.92	57 32.4	19 23.05	-22.93	-0 20.91	+14.56	-0.72	-17.30	5 57 46.27	54 55 28.4
5 58 43.2	9.0	0 36.20	59 58.8	11 25.45	-28.72	-0 20.91	+13.15	-0.74	-17.10	6 0 19.46	54 3 18.8
6 1 0.5	9.0	2 56.00	2 17.6	14 42.55	-29.52	-0 20.91	+13.30	-0.76	-16.90	6 2 39.24	54 0 1.0
6 1 58.4	8.8	3 54.88	3 39.3	7 10.10	-11.96	-0 20.91	+13.60	-0.77	-17.00	6 3 38.12	54 7 51.2
6 4 29.7	8.8	6 25.76	5 53.4	10 17.90	-24.87	-0 20.91	+13.20	-0.80	-16.90	6 6 8.97	54 4 29.9
*6 6 19.3	7.8	8 14.24	8 17.4	32 33.35	+2.48	-0 20.91	+10.87	-0.82	-16.70	6 7 57.40	53 42 39.5
6 6 41.4	9.0	8 36.86	7 44.8	32 33.35	-40.34	-0 20.91	+10.14	-0.82	-16.70	6 8 20.02	53 41 55.9
6 8 6.0	8.8	10 1.74	9 28.6	56 52.40	-25.27	-0 20.91	+13.56	-0.85	-16.80	6 9 44.91	54 17 55.2
6 8 24.7	6.6	10 20.38	9 51.0	56 52.40	-22.45	-0 20.91	+13.59	-0.85	-16.80	6 10 3.55	54 17 58.1
6 9 49.5	8.8	11 45.48	11 7.5	44 51.85	-28.87	-0 20.91	+13.93	-0.87	-16.80	6 11 28.64	54 29 52.3
6 10 59.2	9.0	12 54.00	12 29.8	6 1.05	-18.54	-0 20.91	+13.45	-0.88	-16.70	6 12 37.13	54 8 53.0
6 11 42.8	9.0	13 38.56	13 17.4	13 33.90	-16.29	-0 20.91	+13.52	-0.89	-16.60	6 13 21.67	54 1 22.5
6 13 57.8	8.8	15 55.10	15 18.0	39 13.35	-28.12	-0 20.91	+14.01	-0.92	-16.70	6 15 38.22	54 35 31.4
6 15 33.7	9.0	17 27.30	16 53.6	16 0.35	-26.54	-0 20.92	+11.93	-0.90	-16.20	6 17 10.32	52 58 44.4
6 16 21.8	8.8	18 17.56	18 6.7	17 6.15	-8.19	-0 20.90	+14.65	-0.95	-16.80	6 18 0.68	54 57 58.9
6 17 23.2	9.1	19 19.16	18 59.0	51 13.10	-15.39	-0 20.91	+13.82	-0.96	-16.50	6 19 2.22	54 23 44.1
6 20 21.7	7.5	22 17.48	21 58.4	18 33.05	-14.35	-0 20.89	+14.67	-1.01	-16.60	6 22 0.55	54 56 25.7
6 35 4.4	8.8	37 0.00	36 17.9	47 31.90	-32.02	-0 20.90	+13.63	-1.15	-15.80	6 36 42.87	54 27 7.6
6 43 14.0	8.8	45 12.08	44 23.6	28 17.35	-36.60	-0 20.88	+13.96	-1.26	-15.70	6 44 54.87	54 46 17.3
6 44 33.2	9.0	46 28.58	45 44.8	51 7.35	-33.34	-0 20.89	+13.35	-1.26	-15.50	6 46 11.33	54 23 30.1
6 45 25.5	8.3	47 20.72	46 58.7	48 40.05	-16.74	-0 20.89	+14.02	-1.27	-15.50	6 47 3.46	54 26 14.6
6 46 23.9	9.0	48 20.58	48 9.1	34 34.40	-8.68	-0 20.89	+14.48	-1.29	-15.50	6 48 3.31	54 40 28.6
6 47 29.4	8.8	49 24.86	48 59.7	58 46.30	-19.25	-0 20.89	+13.80	-1.28	-15.40	6 49 7.58	54 16 5.5
6 48 35.4	8.7	50 31.88	49 53.8	36 55.10	-28.86	-0 20.89	+13.89	-1.31	-15.40	6 50 14.59	54 37 47.1
6 49 52.8	8.7	51 47.92	50 57.7	51 46.50	-38.25	-0 20.89	+13.31	-1.32	-15.30	6 51 30.60	54 22 45.7
6 51 14.9	7.7	53 10.90	52 31.5	1 13.85	-30.13	-0 20.89	+13.32	-1.31	-15.00	6 52 53.58	54 13 26.7
6 54 42.7	8.8	56 38.76	56 4.2	47 21.05	-26.31	-0 20.89	+13.77	-1.37	-15.20	6 56 21.39	54 27 23.2
ZONE 283, MARCH 1, 1874.											
6 17 23.4	7.8	19 10.78	18 46.7	2 54.35	-19.33	-0 17.01	+10.91	-0.79	-16.40	6 18 57.77	52 11 57.1
6 18 54.2	8.0	20 44.12	20 18.3	21 35.65	-20.36	-0 17.01	+11.57	-0.82	-16.60	6 20 31.12	52 53 15.1
6 20 11.0	8.3	22 6.16	21 35.5	22 7.60	-24.24	-0 16.99	+13.79	-0.89	-17.20	6 21 53.24	54 52 40.8
6 21 55.8	8.9	23 46.84	23 19.6	4 6.55	-20.83	-0 17.00	+13.16	-0.92	-16.90	6 23 33.83	54 10 44.7
6 23 49.6	8.0	25 39.02	24 58.6	10 27.95	-32.48	-0 17.01	+10.32	-0.86	-16.20	6 25 25.93	52 4 9.4
6 26 26.8	9.0	28 13.70	27 39.2	2 49.65	-28.89	-0 17.02	+8.54	-0.85	-15.60	6 28 0.49	50 11 49.9
6 26 58.3	9.4	28 47.26	29 13.1	51 38.65	+20.60	-0 17.00	+11.02	-0.90	-16.20	6 28 34.15	52 23 52.2
6 27 52.8	9.0	29 44.30	30 2.0	8 47.55	+14.54	-0 17.00	+13.17	-0.94	-16.70	6 29 31.26	54 6 38.8
6 30 17.4	9.0	32 10.90	31 39.1	34 34.00	-25.22	-0 17.00	+11.43	-0.94	-16.20	6 31 57.77	52 40 11.1
6 32 8.3	8.8	33 58.26	33 22.2	59 24.50	-28.91	-0 17.00	+10.90	-0.95	-16.00	6 33 45.09	52 15 16.5
6 35 19.8	9.2	37 10.98	36 28.0	1 8.55	-32.89	-0 16.99	+12.71	-1.03	-16.50	6 36 57.86	54 13 29.5
6 36 47.7	8.8	38 38.30	38 6.9	58 50.45	-25.14	-0 17.00	+10.97	-1.00	-15.90	6 38 25.08	52 15 54.0
6 38 8.2	8.7	39 59.40	39 29.0	50 42.45	-23.15	-0 16.99	+13.15	-1.07	-16.40	6 39 46.25	54 24 5.6
6 39 15.9	7.7	41 8.34	40 23.2	41 4.05	-34.21	-0 16.99	+13.06	-1.09	-16.40	6 40 55.18	54 33 32.8
6 40 40.4	7.5	42 33.26	41 50.1	3 24.50	-33.07	-0 16.99	+12.83	-1.09	-16.30	6 42 20.07	54 11 13.2
6 41 41.0	8.8	43 30.54	43 3.7	36 30.50	-21.27	-0 17.00	+11.29	-1.06	-15.80	6 43 17.27	52 38 17.9
6 43 4.9	8.9	44 55.76	44 1.5	49 18.90	-41.33	-0 16.99	+12.90	-1.12	-16.20	6 44 42.55	54 25 10.5
6 45 32.0	9.0	47 18.38	47 53.2	5 11.85	-21.12	-0 17.02	+8.46	-1.05	-14.90	6 47 4.95	50 9 34.4
6 45 39.5	8.8	47 25.90	47 23.2	5 11.85	-2.26	-0 17.02	+8.62	-1.05	-14.90	6 47 12.47	50 9 53.4

* 6 7 [57.40]

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
6 46 23.9	8.6	48 16.42	48 6.7	34 32.55	- 7.34	-0 16.99	+13.99	-1.17	-16.20	6 48 3.17	54 40 31.6
6 57 30.7	8.0	59 21.48	58 54.0	1 36.55	-21.03	-0 16.98	+13.04	-1.21	-15.60	6 59 8.15	54 13 12.7
6 58 56.6	8.4	0 48.48	0 8.7	40 28.00	-30.18	-0 16.98	+13.14	-1.30	-15.60	7 0 35.09	54 34 12.0
6 59 58.4	9.2	1 49.02	1 33.2	16 11.40	-12.16	-0 16.99	+12.84	-1.30	-15.40	7 1 35.57	53 58 46.5
7 0 46.2	8.7	2 38.40	2 16.9	8 9.05	-16.49	-0 16.99	+13.10	-1.31	-15.40	7 2 24.95	54 6 44.7
7 1 22.7	6.9	3 13.96	3 26.1	33 29.05	+ 9.15	-0 16.98	+13.88	-1.34	-15.50	7 3 0.53	54 41 51.0
7 2 30.9	8.9	4 23.32	4 1.7	5 25.70	-16.55	-0 16.99	+12.94	-1.33	-15.30	7 4 9.85	54 9 27.8
7 3 20.3	7.0	5 8.64	4 53.3	29 40.05	-10.55	-0 16.99	+11.76	-1.29	-15.00	7 4 55.12	52 45 18.4
7 5 17.3	8.5	7 7.76	6 30.2	44 55.95	-28.57	-0 16.98	+13.42	-1.37	-15.30	7 6 54.28	54 29 45.7
7 6 9.8	6.7	7 58.32	7 33.3	53 52.60	-19.98	-0 16.99	+11.13	-1.31	-14.70	7 7 44.75	52 20 55.9
7 8 18.8	8.8	10 11.38	9 43.9	59 11.95	-21.02	-0 16.98	+13.29	-1.41	-15.10	7 9 57.83	54 15 37.1
7 9 34.3	9.1	11 28.34	10 50.2	29 31.40	-28.76	-0 16.98	+13.68	-1.43	-15.20	7 11 14.80	54 45 10.1
7 10 13.5	8.2	12 4.16	11 53.7	46 0.70	- 8.36	-0 16.99	+11.18	-1.36	-14.50	7 11 50.54	52 28 59.4
7 12 31.8	8.4	14 23.24	13 48.9	28 5.55	-25.88	-0 16.98	+13.69	-1.47	-15.00	7 14 9.66	54 46 38.8
7 13 37.8	6.0	15 25.66	14 50.5	7 3.20	-28.27	-0 16.99	+10.61	-1.39	-14.30	7 15 11.97	52 7 36.3
7 14 31.9	9.0	16 21.22	15 57.3	18 6.30	-18.84	-0 16.99	+11.79	-1.43	-14.40	7 16 7.55	52 56 43.6
7 16 29.3	8.9	18 16.76	.....	.....	.....	-0 16.98	.....	-1.44	.....	7 18 3.06	.....
7 17 38.1	9.0	19 28.36	18 57.1	54 28.75	-23.93	-0 16.98	+13.31	-1.51	-14.60	7 19 14.69	54 20 17.2
7 19 45.8	8.7	21 37.14	20 51.2	27 47.45	-34.61	-0 16.97	+13.46	-1.53	-14.70	7 21 23.49	54 46 47.6
7 21 23.4	8.9	23 12.52	22 22.9	14 13.75	-38.13	-0 16.98	+12.49	-1.53	-14.40	7 22 58.80	54 0 17.0
ZONE 284, MARCH 2, 1874.											
6 17 23.4	7.9	19 10.14	18 29.4	2 38.30	-32.63	-0 16.36	+10.54	-0.77	-16.50	6 18 57.80	52 11 59.3
6 18 54.2	8.4	20 43.46	20 7.4	21 25.85	-28.49	-0 16.35	+11.35	-0.80	-16.70	6 20 31.14	52 53 16.4
6 20 11.0	8.7	22 5.60	21 37.6	22 8.30	-22.11	-0 16.35	+13.78	-0.87	-17.30	6 21 53.34	54 52 42.0
6 21 55.8	9.0	23 46.28	23 22.8	4 9.20	-18.00	-0 16.35	+13.16	-0.89	-17.00	6 23 33.95	54 10 44.8
6 23 49.6	7.8	25 38.36	25 13.2	10 38.60	-20.26	-0 16.36	+10.53	-0.83	-16.30	6 25 25.95	52 4 11.0
6 26 26.8	9.1	28 13.08	27 34.7	2 45.55	-32.15	-0 16.37	+ 8.39	-0.83	-15.70	6 28 0.54	50 11 50.4
6 26 58.3	9.3	28 46.60	28 38.7	51 10.55	- 6.31	-0 16.36	+11.10	-0.87	-16.30	6 28 34.16	52 23 53.3
6 27 52.8	9.1	29 43.70	29 55.3	8 41.60	+ 8.90	-0 16.34	+13.15	-0.92	-16.80	6 29 31.34	54 6 39.0
6 30 17.4	9.3	32 10.22	31 41.4	34 36.50	-22.85	-0 16.34	+11.41	-0.92	-16.30	6 31 57.77	52 40 10.8
6 32 8.3	8.8	33 57.58	33 37.8	59 36.85	-15.85	-0 16.35	+11.09	-0.93	-16.10	6 33 45.08	52 15 17.2
6 35 19.8	9.0	37 10.26	36 37.3	1 14.45	-25.24	-0 16.34	+12.87	-1.01	-16.60	6 36 57.81	54 13 31.2
6 36 47.7	8.6	38 37.56	38 4.8	58 48.10	-26.27	-0 16.35	+10.88	-0.98	-16.00	6 38 25.01	52 15 55.0
6 38 8.2	8.5	39 58.74	39 34.6	50 45.41	-18.35	-0 16.33	+13.17	-1.04	-16.50	6 39 46.28	54 24 7.3
6 39 15.9	7.8	41 7.66	40 43.6	41 19.35	-18.28	-0 16.33	+13.40	-1.06	-16.50	6 40 55.19	54 33 33.6
6 40 40.4	7.7	42 32.58	42 5.3	3 35.75	-20.90	-0 16.33	+13.08	-1.07	-16.40	6 42 20.07	54 11 14.2
6 41 41.0	9.0	43 29.78	43 4.1	36 30.45	-20.40	-0 16.33	+11.25	-1.04	-15.90	6 43 17.20	52 38 18.6
6 43 4.9	8.8	44 54.98	44 16.9	49 31.95	-29.00	-0 16.33	+13.21	-1.10	-16.30	6 44 42.45	54 25 9.9
6 45 32.0	9.2	47 17.72	46 41.9	5 2.45	-30.01	-0 16.35	+ 8.23	-1.02	-15.00	6 47 4.99	50 9 34.6
6 45 39.5	9.0	47 25.32	47 12.5	5 2.45	-10.73	-0 16.35	+ 8.53	-1.02	-15.00	6 47 12.59	50 9 54.1
6 46 23.9	8.8	48 15.82	48 10.2	34 35.00	- 4.24	-0 16.33	+13.95	-1.15	-16.30	6 48 3.25	54 40 32.2
6 57 30.7	8.0	59 20.80	58 50.2	1 34.10	-23.40	-0 16.32	+12.93	-1.19	-15.70	6 59 8.15	54 13 12.5
6 58 56.6	8.7	0 47.80	0 0.9	40 21.15	-35.57	-0 16.32	+12.95	-1.28	-15.70	7 0 35.09	54 34 13.2
6 59 58.4	9.1	1 48.42	1 17.3	15 58.70	-23.93	-0 16.32	+12.62	-1.28	-15.50	7 1 35.66	53 58 47.0
7 0 46.2	8.7	2 37.70	2 24.1	8 13.65	-10.43	-0 16.32	+13.13	-1.29	-15.50	7 2 24.94	54 6 46.0
7 1 22.7	6.0	3 13.22	3 13.2	33 19.05	- 0.95	-0 16.32	+13.88	-1.31	-15.70	7 3 0.48	54 41 50.6
7 2 30.9	9.0	4 22.74	3 59.8	5 24.30	-17.54	-0 16.32	+12.90	-1.31	-15.50	7 4 9.96	54 9 27.9
7 3 20.3	7.0	5 7.94	4 48.4	29 35.95	-15.44	-0 16.31	+11.69	-1.27	-15.10	7 4 55.12	52 45 17.5
7 5 17.3	8.3	7 7.08	6 29.2	44 55.80	-28.80	-0 16.31	+13.38	-1.35	-15.40	7 6 54.29	54 29 45.5
7 6 9.8	6.0	7 57.68	7 35.2	53 54.50	-17.98	-0 16.32	+11.14	-1.29	-14.80	7 7 44.80	52 20 55.9
7 8 18.8	9.0	10 10.72	9 35.3	59 5.70	-27.04	-0 16.31	+13.06	-1.38	-15.30	7 9 57.87	54 15 36.9
7 9 34.3	9.3	11 27.70	10 44.2	29 25.70	-32.84	-0 16.31	+13.54	-1.40	-15.30	7 11 14.86	54 45 11.4

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
7 10 13.5	8.7	12 3.48	11 51.5	45 59.80	— 9.56	—0 16.31	+11.14	—1.33	—14.70	7 11 50.57	52 28 58.8
7 12 31.8	8.8	14 22.58	13 31.5	27 52.30	—38.56	—0 16.31	+13.28	—1.44	—15.20	7 14 9.70	54 46 38.7
7 13 37.8	6.0	15 24.98	15 2.5	7 12.40	—18.07	—0 16.32	+10.78	—1.36	—14.40	7 15 11.99	52 7 37.3
7 14 31.9	9.0	16 20.52	15 56.2	18 5.55	—19.16	—0 16.30	+11.75	—1.40	—14.60	7 16 7.57	52 56 43.8
7 16 29.3	8.7	18 16.20	17 42.2	37 46.75	—27.01	—0 16.30	+11.21	—1.42	—14.40	7 18 3.20	52 36 54.2
7 17 38.1	9.1	19 27.64	18 52.2	54 24.90	—27.00	—0 16.30	+13.22	—1.49	—14.80	7 19 14.67	54 20 17.6
7 19 45.8	9.0	21 36.52	21 8.6	28 1.20	—21.04	—0 16.30	+13.71	—1.51	—14.80	7 21 23.56	54 46 47.6
7 21 23.4	9.0	23 11.96	22 39.8	14 27.05	—24.75	—0 16.29	+12.86	—1.51	—14.50	7 22 58.95	54 0 17.3
ZONE 285, MARCH 4, 1874.											
6 17 16.7	9.0	19 5.20	18 24.6	32 46.95	—32.19	—0 15.08	+10.81	—0.72	—16.90	6 18 54.22	52 41 50.6
6 18 45.7	9.3	20 31.42	19 49.9	15 33.35	—34.17	—0 15.08	+ 8.78	—0.71	—16.30	6 20 20.34	50 59 0.7
6 19 29.4	8.0	21 19.50	21 4.0	23 36.65	—11.96	—0 15.07	+12.46	—0.77	—17.20	6 21 8.55	53 51 22.3
6 21 44.2	8.6	23 31.82	22 49.2	30 39.30	—32.96	—0 15.09	+11.71	—0.79	—17.00	6 23 20.82	53 43 57.9
6 23 19.9	8.3	25 9.06	24 40.9	3 28.00	—21.58	—0 15.08	+12.69	—0.81	—17.10	6 24 58.08	54 11 21.4
6 24 36.3	8.3	26 20.76	25 41.5	15 56.85	—33.07	—0 15.08	+ 7.80	—0.75	—15.90	6 26 9.58	49 58 37.2
6 26 4.5	8.8	27 55.48	27 25.0	37 45.85	—23.66	—0 15.09	+12.00	—0.84	—16.90	6 27 44.42	53 37 0.7
6 27 18.8	8.8	29 9.94	28 34.6	12 48.90	—27.13	—0 15.08	+12.34	—0.86	—17.00	6 28 58.90	54 1 54.3
6 27 36.5	8.7	29 26.26	30 0.6	12 48.90	+26.36	—0 15.08	+12.37	—0.86	—17.00	6 29 15.22	54 2 47.8
6 29 42.0	7.9	31 33.46	31 2.8	6 46.35	—23.54	—0 15.08	+12.46	—0.89	—16.90	6 31 22.39	54 8 0.5
6 30 50.9	9.0	32 35.02	32 16.5	19 43.10	—15.58	—0 15.08	+ 8.29	—0.84	—16.00	6 32 23.74	49 55 8.3
6 32 20.1	9.0	34 10.14	33 44.0	23 29.30	—19.65	—0 15.07	+13.51	—0.94	—17.10	6 33 59.08	54 51 22.0
6 33 43.9	8.2	35 33.60	35 4.3	46 49.15	—22.28	—0 15.07	+12.93	—0.94	—16.90	6 35 22.51	54 27 59.0
6 35 17.9	8.9	37 8.12	36 43.7	33 24.70	—18.90	—0 15.08	+12.22	—0.95	—16.70	6 36 56.96	53 41 26.2
6 36 48.6	9.1	38 37.46	39 1.9	58 25.60	—27.85	—0 15.08	+11.59	—0.95	—16.50	6 38 26.27	53 16 15.8
6 37 59.2	8.3	39 47.90	39 11.0	4 34.20	—28.93	—0 15.08	+11.54	—0.96	—16.40	6 39 36.69	53 10 6.1
6 39 18.3	8.7	41 3.24	40 33.5	29 29.30	—24.58	—0 15.07	+ 9.01	—0.92	—15.70	6 40 51.93	50 45 13.4
6 40 30.6	8.5	42 17.04	41 40.9	6 40.40	—28.98	—0 15.07	+10.26	—0.96	—16.00	6 42 5.77	52 7 58.7
6 41 18.5	9.5	43 2.26	42 51.0	25 21.40	— 8.93	—0 15.07	+11.22	—0.99	—16.20	6 42 51.00	52 49 38.5
6 41 18.5	8.7	43 4.40	42 46.0	25 21.40	—14.54	—0 15.07	+11.16	—0.99	—16.20	6 42 53.14	52 49 32.8
6 42 25.9	9.0	44 14.96	43 57.1	42 45.80	—13.92	—0 15.07	+12.09	—1.02	—16.30	6 44 3.72	53 32 9.8
6 44 22.0	8.8	46 8.94	45 36.9	39 2.00	—24.84	—0 15.07	+12.01	—1.04	—16.30	6 45 57.68	53 35 42.4
6 45 49.2	8.8	47 37.76	47 17.0	14 36.10	—16.37	—0 15.07	+11.63	—1.04	—16.10	6 47 26.46	53 0 16.5
6 47 59.2	9.0	49 52.10	49 30.0	21 50.55	—16.63	—0 15.06	+13.52	—1.12	—16.50	6 49 40.85	54 53 3.0
6 49 32.7	9.0	51 19.46	50 56.7	59 9.05	—17.84	—0 15.07	+11.87	—1.09	—16.00	6 51 8.12	53 15 42.1
6 51 20.3	9.0	53 3.80	52 31.1	25 8.25	—27.60	—0 15.06	+ 8.80	—1.05	—15.20	6 52 52.36	50 49 30.7
ZONE 286, MARCH 5, 1874.											
6 26 4.5	8.6	27 54.68	27 24.7	37 48.90	—23.28	—0 14.32	+12.64	—0.81	—17.00	6 27 44.42	53 36 58.8
6 27 18.8	8.7	29 9.16	28 26.9	12 46.60	—32.50	—0 14.31	+12.87	—0.84	—17.10	6 28 58.91	54 1 51.9
6 27 36.5	9.0	29 25.50	29 52.2	12 46.60	+20.52	—0 14.31	+13.15	—0.84	—17.10	6 29 15.25	54 2 45.2
6 29 42.0	9.0	31 32.76	30 57.6	6 45.90	—26.99	—0 14.31	+13.06	—0.96	—17.00	6 31 22.39	54 7 58.2
6 30 50.9	9.0	32 34.28	32 15.1	19 45.05	—16.17	—0 14.33	+ 8.81	—0.92	—16.10	6 32 23.67	49 55 6.5
6 32 20.1	9.0	34 9.30	33 47.4	23 36.05	—16.49	—0 14.30	+14.27	—0.91	—17.20	6 33 59.04	54 51 19.4
6 33 43.9	8.2	35 32.86	35 7.9	46 55.45	—19.01	—0 14.30	+13.65	—0.92	—17.00	6 35 22.56	54 27 56.9
6 35 17.9	9.1	37 7.22	36 50.6	33 35.00	—12.86	—0 14.30	+12.95	—0.92	—16.70	6 36 56.87	53 41 23.0
6 36 48.6	9.0	38 36.70	38 9.7	58 35.95	—21.12	—0 14.31	+12.36	—0.92	—16.60	6 38 26.31	53 16 13.1
6 37 59.2	7.0	39 47.16	39 6.4	4 33.00	—31.99	—0 14.31	+12.07	—0.94	—16.50	6 39 36.74	53 10 4.9
6 39 18.3	9.0	41 2.48	40 36.4	29 34.40	—21.60	—0 14.31	+ 9.58	—0.90	—15.90	6 40 51.95	50 45 11.9
6 40 30.6	8.4	42 16.30	41 48.5	6 49.30	—22.32	—0 14.30	+10.95	—0.94	—16.10	6 42 5.82	52 7 57.4

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	° "	"	m s	"	s	"	h m s	° ' "
6 41 18.5	9.3	43 1.32	42 55.1	25 26.05	- 4.90	-0 14.30	+11.84	-0.96	-16.30	6 42 50.86	52 49 38.6
6 41 18.5	8.7	43 3.48	42 51.8	25 26.05	- 9.25	-0 14.30	+11.81	-0.96	-16.30	6 42 53.02	52 49 34.3
6 42 25.9	8.7	44 14.04	44 41.4	43 23.70	+21.30	-0 14.30	+12.65	-1.00	-16.40	6 44 3.59	53 32 7.8
6 44 22.0	8.8	46 8.10	45 37.6	39 5.65	-23.68	-0 14.30	+12.86	-1.02	-16.50	6 45 57.63	53 35 40.8
6 45 49.2	8.8	47 36.96	47 3.9	14 28.80	-26.06	-0 14.30	+12.05	-1.02	-16.20	6 47 26.45	53 0 14.7
6 47 59.2	8.9	49 51.30	49 29.5	21 52.85	-16.41	-0 14.28	+14.22	-1.09	-16.60	6 49 40.86	54 53 1.8
6 49 32.7	...	51 18.70	50 54.3	59 10.35	-19.10	-0 14.30	+12.46	-1.07	-16.00	6 51 8.15	53 15 40.4
6 50 53.2	7.5	52 36.40	51 59.9	41 17.70	-28.36	-0 14.28	+12.41	-1.09	-16.00	6 52 25.87	53 33 23.6
6 54 31.2	8.7	56 19.56	55 48.8	26 44.45	-23.80	-0 14.28	+12.80	-1.14	-16.00	6 56 8.98	53 48 1.5
6 55 19.3	8.7	57 6.16	56 44.2	59 18.45	-17.22	-0 14.29	+12.51	-1.13	-15.80	6 56 55.55	53 15 33.9
6 56 9.7	9.0	57 57.08	57 48.1	34 56.00	- 6.98	-0 14.28	+13.11	-1.16	-15.90	6 57 46.47	53 40 7.0
6 57 13.3	8.6	59 2.22	58 52.7	58 31.75	- 7.43	-0 14.29	+12.58	-1.14	-15.80	6 58 51.60	53 16 30.3
6 58 37.7	9.3	0 27.36	59 57.1	33 15.60	-23.47	-0 14.28	+12.81	-1.18	-15.70	7 0 16.73	53 41 30.6
6 59 22.5	9.0	1 10.38	0 56.8	51 55.70	-10.61	-0 14.29	+12.55	-1.18	-15.80	7 0 59.72	53 23 3.0
7 1 0.5	9.5	2 46.24	2 19.9	5 1.75	-20.63	-0 14.29	+12.05	-1.19	-15.70	7 2 35.55	53 9 46.4
7 2 11.4	9.3	3 58.08	3 47.2	17 13.85	- 8.59	-0 14.28	+12.13	-1.20	-17.20	7 3 47.37	52 57 44.8
7 3 5.9	9.1	4 53.26	4 35.5	25 54.45	-13.75	-0 14.28	+12.93	-1.23	-17.40	7 4 42.58	53 48 59.5
7 4 4.2	9.0	5 50.92	5 29.9	8 47.10	-16.88	-0 14.28	+11.17	-1.19	-16.80	7 5 40.17	52 6 2.5
7 5 12.3	7.8	6 57.58	6 30.5	59 38.75	-21.70	-0 14.28	+11.32	-1.21	-15.30	7 6 46.82	52 15 7.6
7 6 50.4	8.8	8 35.62	8 8.7	42 27.35	-20.91	-0 14.29	+12.63	-1.26	-15.60	7 8 24.87	53 32 20.7
7 8 6.8	7.8	9 52.54	9 25.0	3 17.85	-22.05	-0 14.28	+11.16	-1.23	-15.10	7 9 41.74	52 11 28.0
7 9 18.0	8.9	11 3.08	10 26.2	11 42.45	-29.68	-0 14.27	+10.72	-1.25	-15.00	7 10 52.26	52 2 55.3
ZONE 287, MARCH 21, 1874.											
7 14 28.6	9.1	16 2.50	15 43.1	49 58.15	-15.13	-0 2.59	+12.23	-0.94	-16.80	7 16 3.75	53 24 54.5
7 22 46.2	9.0	24 21.14	23 54.5	23 33.15	-20.52	-0 2.59	+12.54	-1.02	-16.70	7 24 22.31	53 51 13.9
7 23 56.7	9.2	25 32.94	25 22.8	38 46.25	- 7.65	-0 2.59	+13.52	-1.05	-16.80	7 25 34.12	54 36 14.4
7 25 29.6	8.0	27 4.82	26 23.9	35 1.90	-30.95	-0 2.59	+13.03	-1.07	-16.80	7 27 5.98	54 39 34.8
7 26 23.5	8.6	27 57.62	27 31.7	36 56.25	-20.10	-0 2.60	+12.25	-1.06	-16.40	7 27 58.71	53 37 50.9
7 27 44.5	9.0	29 20.66	28 54.1	32 37.55	-20.60	-0 2.59	+12.35	-1.07	-16.40	7 29 21.75	53 42 9.1
7 28 51.4	8.3	30 26.02	29 56.7	25 38.15	-22.63	-0 2.59	+12.36	-1.09	-16.50	7 30 27.10	53 49 6.3
7 30 18.9	8.4	31 52.98	31 27.8	47 12.55	-19.63	-0 2.60	+12.11	-1.09	-16.30	7 31 54.02	53 27 34.7
7 31 19.7	8.8	32 55.12	32 23.8	21 3.30	-23.54	-0 2.59	+13.48	-1.11	-16.60	7 32 56.24	54 53 41.0
7 32 44.4	9.0	34 18.76	33 53.5	41 55.70	-19.67	-0 2.60	+12.19	-1.12	-16.20	7 34 19.77	53 32 51.5
7 34 25.0	9.5	35 58.80	35 25.8	1 21.90	-25.85	-0 2.60	+11.69	-1.15	-16.10	7 35 59.76	53 13 18.6
7 37 7.3	9.0	38 40.04	38 10.9	46 26.80	-22.66	-0 2.59	+12.03	-1.19	-16.00	7 38 40.97	53 28 17.1
7 38 19.5	9.2	39 55.38	39 19.4	22 18.95	-27.99	-0 2.59	+12.37	-1.18	-16.10	7 39 56.34	53 52 19.8
ZONE 288, MARCH 22, 1874.											
7 5 12.3	7.6	6 44.92	6 24.8	59 43.00	-16.10	-0 2.04	+10.98	-0.78	-16.80	7 6 46.83	52 15 8.1
7 6 50.4	8.7	8 22.92	8 3.3	42 31.55	-15.24	-0 2.05	+12.36	-0.82	-17.10	7 8 24.85	53 32 21.4
7 8 6.8	7.8	9 39.80	9 11.7	3 14.95	-22.54	-0 2.04	+10.76	-0.81	-16.70	7 9 41.66	52 11 29.4
7 9 18.0	9.0	10 50.42	10 21.0	11 46.45	-23.65	-0 2.04	+10.52	-0.82	-16.60	7 10 52.26	52 2 56.5
7 12 2.4	8.3	13 37.54	13 7.3	55 7.65	-23.04	-0 2.05	+12.98	-0.90	-17.20	7 13 39.43	54 19 37.6
7 34 25.0	9.4	35 58.40	35 34.9	1 28.40	-18.40	-0 2.04	+11.96	-1.13	-16.10	7 35 59.94	53 13 19.7
7 37 7.3	8.9	38 39.60	38 17.6	46 31.55	-17.13	-0 2.04	+12.24	-1.16	-16.10	7 38 41.11	53 28 17.9
7 39 39.3	8.7	41 12.16	40 40.4	11 29.75	-24.42	-0 2.04	+12.72	-1.22	-16.20	7 41 13.64	54 3 12.6
7 41 39.8	9.6	43 13.52	42 48.7	19 6.65	-19.10	-0 2.04	+12.80	-1.22	-16.10	7 43 14.98	53 55 41.0
7 42 33.3	7.9	44 4.58	43 50.9	9 1.75	-10.76	-0 2.04	+11.98	-1.22	-15.80	7 44 5.99	53 5 53.7
7 44 53.8	8.8	46 27.70	46 11.3	10 19.00	-12.59	-0 2.04	+12.92	-1.27	-16.00	7 46 29.11	54 4 35.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. W re.	Sum of Reductions.			Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.		R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"		s	"	h m s	° ' "
7 46 56.3	8.9	48 29.44	48 18.7	1 36.00	- 8.38	-0 2.04	+12.09	-1.27	-15.70		7 48 30.79	53 13 21.7
7 48 33.3	8.6	50 6.96	49 42.6	32 18.15	-18.89	-0 2.04	+12.52	-1.29	-15.70		7 50 8.32	53 42 29.3
7 49 42.7	9.0	51 14.20	50 58.6	53 45.75	-12.18	-0 2.04	+12.26	-1.30	-15.50		7 51 15.52	53 21 8.3
7 50 52.1	9.5	52 24.16	52 9.3	43 43.45	-11.59	-0 2.03	+12.45	-1.33	-15.50		7 52 25.47	53 31 11.3
7 52 9.3	9.4	53 42.14	53 11.4	24 0.85	-23.69	-0 2.03	+12.60	-1.35	-15.60		7 53 43.44	53 50 41.7
7 53 19.3	7.0	54 52.22	54 18.8	13 4.75	-25.67	-0 2.03	+12.77	-1.36	-15.60		7 54 53.52	54 1 35.9
7 55 6.8	9.0	56 39.44	56 25.5	58 50.10	-10.62	-0 2.03	+13.28	-1.39	-15.60		7 56 40.71	54 16 6.0
7 56 8.6	9.0	57 41.06	57 21.3	35 15.10	-15.35	-0 2.03	+12.44	-1.39	-15.00		7 57 42.29	53 39 35.9
7 58 11.7	8.3	59 44.46	59 28.7	36 53.10	-11.97	-0 2.02	+13.58	-1.44	-15.50		7 59 45.70	54 38 1.8
7 59 5.2	8.6	0 37.62	0 28.1	6 47.25	- 7.28	-0 2.02	+13.07	-1.43	-15.30		8 0 38.84	54 8 12.0
7 59 56.3	6.7	1 30.98	1 0.6	20 12.00	-22.86	-0 2.02	+13.66	-1.47	-15.50		8 1 32.20	54 54 32.0
8 1 10.0	9.5	2 44.82	2 15.8	35 58.90	-21.95	-0 2.02	+13.41	-1.47	-15.30		8 2 46.02	54 38 45.8
8 2 29.1	9.4	4 0.42	3 30.1	36 25.00	-23.50	-0 2.03	+12.33	-1.45	-15.00		8 4 1.57	53 38 17.3
8 3 52.2	8.7	5 21.00	4 50.8	55 41.65	-23.60	-0 2.03	+11.94	-1.45	-14.90		8 5 22.12	53 19 0.2
8 5 22.9	8.5	6 56.02	6 32.7	47 38.00	-17.72	-0 2.02	+13.34	-1.51	-15.20		8 6 57.15	54 27 10.7
ZONE 289, MARCH 23, 1874.												
7 8 6.8	8.8	9 39.22	9 26.9	3 27.95	- 9.86	-0 1.31	+11.26	-0.80	-16.70		7 9 41.82	52 11 29.6
7 9 18.0	9.2	10 49.72	10 34.1	11 59.00	-12.55	-0 1.31	+11.00	-0.82	-16.70		7 10 52.29	52 2 55.6
7 12 2.4	8.5	13 36.96	13 12.4	55 10.95	-18.77	-0 1.30	+13.45	-0.87	-17.30		7 13 39.63	54 19 39.0
7 13 12.9	8.8	14 47.88	14 35.7	19 58.55	- 9.17	-0 1.30	+14.39	-0.93	-17.40		7 14 50.52	54 55 1.7
7 14 28.6	9.3	16 1.26	15 42.0	49 57.45	-15.06	-0 1.31	+12.42	-0.88	-16.90		7 16 3.85	53 24 55.4
7 15 15.4	9.0	16 48.20	16 40.5	13 44.45	- 6.06	-0 1.31	+12.25	-0.88	-16.80		7 16 50.76	53 1 17.2
7 16 16.2	8.8	17 50.68	17 30.0	29 39.50	-16.01	-0 1.31	+12.98	-0.92	-17.00		7 17 53.24	53 45 12.7
7 17 12.4	8.6	18 45.10	18 27.8	47 49.60	-13.48	-0 1.31	+12.63	-0.92	-16.90		7 18 47.64	53 27 4.8
7 18 50.1	9.0	20 22.86	20 9.1	6 16.35	-10.83	-0 1.31	+12.28	-0.95	-16.70		7 20 25.35	53 8 40.5
7 20 16.2	9.1	21 49.90	21 30.0	20 35.00	-15.34	-0 1.29	+13.05	-0.99	-17.20		7 21 52.41	53 54 17.4
7 21 14.2	9.2	22 46.52	22 22.3	59 58.45	-18.95	-0 1.30	+12.27	-0.98	-17.00		7 22 48.99	53 14 49.7
7 22 46.2	8.7	24 19.82	23 56.6	23 36.51	-17.90	-0 1.29	+13.02	-1.01	-16.80		7 24 22.30	53 51 13.5
7 23 56.7	9.3	25 31.92	25 21.9	38 48.00	- 7.58	-0 1.29	+14.01	-1.04	-17.00		7 25 34.41	54 36 13.0
7 25 29.6	7.7	27 3.62	26 33.3	35 11.95	-22.93	-0 1.29	+13.76	-1.06	-17.00		7 27 6.09	54 39 33.3
7 26 23.5	8.8	27 56.52	28 31.3	37 45.25	+26.89	-0 1.27	+12.59	-1.04	-16.60		7 27 58.96	53 37 49.0
7 27 44.5	8.8	29 19.56	29 4.0	32 46.55	-12.08	-0 1.30	+12.91	-1.06	-16.90		7 29 21.95	53 42 8.6
7 28 51.4	8.8	30 24.88	30 24.3	26 0.15	- 0.46	-0 1.29	+13.06	-1.08	-16.60		7 30 27.27	53 49 7.0
7 30 18.9	8.8	31 51.78	31 22.6	47 12.50	-22.67	-0 1.30	+12.49	-1.09	-16.40		7 31 54.12	53 27 32.0
7 34 25.0	9.2	35 57.52	36 16.9	2 5.15	+15.20	-0 1.30	+12.36	-1.10	-16.20		7 35 59.83	53 13 16.9
7 37 7.3	9.0	38 38.88	38 8.1	46 26.25	-23.98	-0 1.30	+12.46	-1.14	-16.20		7 38 41.15	53 28 16.5
7 39 39.3	8.8	41 11.50	40 48.3	11 37.40	-17.81	-0 1.28	+13.23	-1.19	-16.30		7 41 13.77	54 3 12.0
7 41 39.8	9.2	43 12.66	42 55.8	19 13.55	-13.02	-0 1.28	+13.24	-1.20	-16.20		7 43 14.90	53 55 40.6
7 42 33.3	8.0	44 3.82	44 23.9	9 28.50	+15.79	-0 1.29	+12.29	-1.19	-15.90		7 44 6.01	53 5 53.8
7 44 53.8	8.5	46 26.96	46 11.0	10 20.65	-12.28	-0 1.28	+13.30	-1.25	-16.10		7 46 29.15	54 4 34.2
7 46 56.3	8.8	48 28.84	48 6.6	1 27.70	-17.47	-0 1.29	+12.32	-1.24	-15.80		7 48 30.97	53 13 21.1
7 49 42.7	9.2	51 13.52	50 50.7	53 42.45	-17.80	-0 1.29	+12.52	-1.28	-15.70		7 51 15.61	53 21 6.1
7 50 52.1	9.5	52 23.48	52 2.5	43 38.75	-16.33	-0 1.29	+12.73	-1.30	-15.70		7 52 25.56	53 31 11.4
7 52 9.3	9.0	53 41.46	53 8.7	24 1.00	-25.46	-0 1.28	+12.92	-1.32	-15.70		7 53 43.54	53 50 40.1
7 53 19.3	7.5	54 51.50	54 13.3	13 3.05	-29.36	-0 1.28	+13.03	-1.34	-15.70		7 54 53.57	54 1 34.2
7 55 6.8	8.8	56 38.58	56 8.6	58 38.90	-22.92	-0 1.28	+13.47	-1.37	-15.70		7 56 40.62	54 16 5.1
7 56 8.6	8.8	57 40.40	57 19.0	35 15.45	-16.59	-0 1.28	+12.81	-1.36	-15.40		7 57 42.41	53 39 34.4
7 58 11.7	8.8	59 43.78	59 16.2	36 45.50	-20.90	-0 1.28	+13.87	-1.41	-15.70		7 59 45.79	54 38 0.6
7 59 5.2	8.7	0 36.96	0 14.0	6 38.00	-17.63	-0 1.28	+13.34	-1.41	-15.40		8 0 38.94	54 8 11.1
7 59 56.3	6.6	1 30.28	1 14.8	20 26.50	-11.66	-0 1.28	+14.30	-1.45	-15.60		8 1 32.26	54 54 9.38
8 1 10.0	9.4	2 44.00	2 25.8	36 9.61	-13.78	-0 1.28	+13.99	-1.45	-15.50		8 2 45.96	54 38 23.1
8 2 29.1	9.2	3 59.82	3 45.1	36 39.30	-11.40	-0 1.29	+12.87	-1.43	-15.10		8 4 1.73	53 38 45.6

JOURNAL OF ZONE OBSERVATIONS.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R.A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
8 3 52.2	8.8	5 20.28	4 58.2	55 49.35	-17.27	-0 1.28	+12.41	-1.43	-15.00	8 5 22.17	53 18 59.2
8 5 22.9	8.6	6 55.24	6 30.3	47 38.30	-18.94	-0 1.27	+13.74	-1.49	-15.30	8 6 57.14	54 27 9.5
ZONE 290, MARCH 24, 1874.											
7 34 25.0	9.5	35 56.74	.....	.....	.....	-0 0.54	.....	-1.07	.....	7 35 59.84	.....
7 38 4.3	8.9	39 33.44	39 18.4	13 0.80	-12.07	-0 0.53	+11.22	-1.08	-15.80	7 39 36.45	52 1 53.4
7 39 40.3	7.2	41 11.26	41 7.3	48 47.15	-3.04	-0 0.52	+14.06	-1.17	-16.40	7 41 14.33	54 26 18.2
7 41 39.8	9.7	43 11.88	42 46.4	19 7.60	-19.64	-0 0.52	+13.32	-1.17	-16.20	7 43 14.91	53 55 40.5
7 42 52.8	9.2	44 23.30	43 58.7	4 59.40	-19.30	-0 0.53	+12.51	-1.17	-15.90	7 44 26.27	53 9 48.4
7 44 45.9	9.3	46 17.00	45 37.6	55 29.20	-30.79	-0 0.53	+12.29	-1.19	-15.90	7 46 19.96	53 19 6.8
7 48 10.0	8.5	49 37.50	49 15.2	24 39.90	-18.82	-0 0.55	+8.80	-1.17	-15.00	7 49 40.26	49 50 5.2
7 49 35.8	8.8	51 2.94	50 36.7	14 31.75	-21.57	-0 0.54	+9.89	-1.18	-15.00	7 51 5.75	51 0 11.6
7 51 28.2	9.2	52 56.98	52 27.9	0 0.35	-23.31	-0 0.53	+11.22	-1.23	-15.30	7 52 59.81	52 14 42.1
7 52 26.9	8.5	53 57.34	53 38.5	41 40.85	-14.61	-0 0.53	+12.90	-1.28	-15.60	7 54 0.19	53 33 11.6
7 53 57.4	8.2	55 22.96	54 54.5	39 26.55	-23.67	-0 0.54	+9.39	-1.21	-14.70	7 55 25.71	50 35 14.1
7 57 9.3	9.3	58 37.30	58 14.4	28 1.40	-18.54	-0 0.53	+10.84	-1.28	-15.20	7 58 40.04	51 46 45.1
7 58 14.4	8.5	59 46.30	59 26.8	13 45.55	-14.98	-0 0.52	+13.48	-1.37	-15.60	7 59 49.08	54 1 6.7
7 59 46.4	8.3	1 15.74	0 48.4	38 45.10	-20.68	-0 0.52	+14.07	-1.41	-15.70	8 1 18.51	54 36 1.8
8 1 10.0	9.6	2 43.12	2 22.0	36 6.20	-15.97	-0 0.52	+14.13	-1.42	-15.60	8 2 45.87	54 38 45.4
8 2 29.1	9.2	3 58.82	3 41.3	36 36.95	-13.57	-0 0.52	+13.01	-1.40	-15.30	8 4 1.53	53 38 16.2
8 24 28.5	7.8	25 55.40	25 31.7	37 11.85	-18.82	-0 0.53	+11.80	-1.59	-13.90	8 25 57.76	52 37 34.6
8 26 19.2	8.5	27 45.96	27 11.4	12 18.35	-27.22	-0 0.52	+12.12	-1.62	-13.90	8 27 48.32	53 2 19.9
8 27 31.1	6.2	28 59.22	28 32.5	24 40.75	-20.57	-0 0.51	+13.17	-1.67	-14.10	8 29 1.57	53 50 4.9
8 28 31.6	6.7	29 59.02	29 39.8	5 59.20	-15.06	-0 0.52	+12.42	-1.65	-13.50	8 30 1.34	53 8 51.8
8 30 2.8	9.7	31 27.96	31 9.4	58 19.70	-15.55	-0 0.54	+9.11	-1.55	-12.80	8 31 30.21	50 16 28.1
8 30 52.4	9.0	32 21.50	32 6.7	1 1.40	-11.59	-0 0.52	+12.55	-1.67	-13.70	8 32 23.79	53 13 52.8
8 34 55.9	9.0	36 21.78	35 55.7	6 57.55	-20.48	-0 0.52	+12.34	-1.72	-13.80	8 36 24.00	53 7 47.2
8 35 55.8	8.7	37 20.72	37 9.4	44 56.80	-8.80	-0 0.52	+13.00	-1.74	-13.90	8 37 22.93	53 30 0.1
8 38 28.8	8.5	39 52.50	39 27.8	20 53.90	-20.82	-0 0.54	+8.69	-1.66	-12.50	8 39 54.59	49 53 47.9
8 41 9.9	9.0	42 36.64	42 16.4	16 5.90	-15.91	-0 0.51	+12.22	-1.77	-12.90	8 42 38.78	52 58 43.8
8 42 49.1	8.7	44 12.28	43 48.1	23 58.20	-19.99	-0 0.52	+9.74	-1.70	-12.30	8 44 14.37	50 50 45.4
8 43 6.7	9.4	44 30.00	44 41.9	25 21.30	+9.83	-0 0.52	+9.73	-1.70	-12.20	8 44 32.09	50 49 52.2
8 44 24.2	7.7	45 48.08	45 31.1	58 51.85	-13.31	-0 0.51	+12.66	-1.81	-12.80	8 45 50.17	53 16 0.7
8 45 37.6	8.0	47 2.95	47 21.5	43 22.15	+14.46	-0 0.51	+12.94	-1.83	-12.80	8 47 5.03	53 31 58.4
8 47 26.1	9.4	48 52.56	48 25.1	5 21.05	-21.57	-0 0.51	+12.33	-1.85	-12.70	8 48 54.59	53 9 22.8
8 49 42.9	8.3	51 9.40	50 41.7	25 53.40	-21.40	-0 0.50	+13.07	-1.88	-12.60	8 51 11.43	53 48 51.4
ZONE 291, MARCH 30, 1874.											
7 34 25.0	9.7	35 52.20	35 14.4	1 17.65	-29.61	+0 3.89	+11.59	-0.91	-16.70	7 35 59.89	53 13 19.2
7 38 4.3	8.7	39 28.88	39 3.3	12 51.60	-20.61	+0 3.91	+10.52	-0.92	-16.20	7 39 36.49	52 1 53.4
7 39 40.3	6.8	41 6.72	40 46.0	48 32.10	-15.75	+0 3.91	+13.25	-1.00	-16.90	7 41 14.39	54 26 19.6
7 41 39.8	9.7	43 7.28	42 47.3	19 11.50	-15.41	+0 3.91	+12.68	-1.01	-16.70	7 43 14.90	53 55 40.0
7 42 52.8	9.5	44 18.64	43 45.8	4 52.10	-25.73	+0 3.90	+11.71	-1.01	-16.40	7 44 26.20	53 9 48.3
7 44 45.9	9.0	46 12.42	45 52.4	55 44.00	-15.63	+0 3.90	+11.97	-1.03	-16.40	7 46 19.97	53 19 6.6
*7 47 15.0	10.0	48 39.54	48 10.9	43 28.00	-23.28	+0 3.91	+9.92	-1.02	-13.00	7 48 47.00	51 31 16.2
7 48 10.0	8.3	49 32.78	49 15.7	24 44.25	-14.43	+0 3.91	+8.37	-1.02	-15.50	7 49 40.15	49 50 4.6
7 49 35.8	8.7	50 58.36	50 27.8	14 26.25	-25.19	+0 3.91	+9.29	-1.03	-15.50	7 51 5.77	51 0 12.7
7 51 28.2	9.0	52 52.48	52 33.2	0 7.55	-15.46	+0 3.92	+10.78	-1.08	-15.80	7 52 59.91	52 14 42.2
7 52 26.9	8.0	53 52.70	53 40.0	41 44.05	-9.87	+0 3.91	+12.28	-1.13	-16.10	7 54 0.14	53 33 12.4
7 53 57.4	7.8	55 18.32	54 41.7	39 19.55	-30.45	+0 3.92	+8.73	-1.07	-15.20	7 55 25.67	50 35 13.5

* 51 [31 16.2]

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
						m s	"	s	"		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
7 57 9.3	9.0	58 32.82	58 5.5	27 57.35	-22.10	+0 3.92	+10.25	-1.13	-15.70	7 58 40.16	51 46 44.8
7 58 14.4	8.6	59 41.80	59 18.8	13 41.80	-17.68	+0 3.92	+12.73	-1.20	-16.10	7 59 49.19	54 1 6.8
7 59 46.4	8.0	1 11.16	0 38.0	38 38.75	-25.15	+0 3.92	+13.28	-1.25	-16.30	8 1 18.53	54 36 2.6
8 1 10.0	9.2	2 38.52	2 10.8	35 59.40	-20.96	+0 3.92	+13.42	-1.26	-16.20	8 2 45.87	54 38 46.3
8 2 29.1	9.2	3 54.28	3 33.4	36 33.45	-16.21	+0 3.93	+12.30	-1.25	-15.80	8 4 1.59	53 38 16.2
8 19 7.0	9.2	20 28.72	20 20.0	10 11.40	- 7.15	+0 3.94	+ 9.55	-1.42	-14.30	8 20 35.66	51 4 44.8
8 20 30.8	8.0	21 52.84	21 39.6	42 34.75	-10.26	+0 3.94	+12.32	-1.43	-15.00	8 21 59.90	53 32 20.3
8 21 41.6	6.8	23 2.98	22 24.1	42 23.85	-30.24	+0 3.93	+11.96	-1.44	-15.00	8 23 10.01	53 32 10.8
8 22 23.3	9.0	23 47.34	23 25.0	24 54.70	-18.03	+0 3.94	+10.40	-1.41	-14.40	8 23 54.32	51 49 51.2
8 24 28.5	7.7	25 50.84	25 22.0	37 6.40	-22.87	+0 3.94	+11.15	-1.45	-14.50	8 25 57.81	52 37 35.1
8 26 19.2	8.7	27 41.34	27 11.6	12 20.00	-23.36	+0 3.93	+11.61	-1.48	-14.60	8 27 48.28	53 2 21.3
8 27 31.1	6.2	28 54.54	28 21.4	24 33.55	-25.55	+0 3.95	+12.44	-1.52	-13.80	8 29 1.50	53 50 7.1
8 28 31.6	7.4	29 54.36	29 41.0	6 0.70	-10.51	+0 3.94	+11.88	-1.51	-14.30	8 30 1.28	53 8 53.8
8 30 2.8	9.4	31 23.38	30 49.3	58 5.35	-28.50	+0 3.95	+ 8.42	-1.42	-13.60	8 31 30.25	50 16 28.3
8 30 52.4	9.0	32 16.88	31 52.0	0 53.45	-19.50	+0 3.94	+11.86	-1.53	-14.40	8 32 23.77	53 13 51.8
8 34 55.9	9.0	36 17.18	35 48.0	6 52.40	-22.91	+0 3.94	+11.73	-1.57	-14.60	8 36 24.01	53 7 48.8
8 35 55.8	9.0	37 16.06	36 53.6	44 45.30	-17.51	+0 3.94	+12.25	-1.59	-14.60	8 37 22.88	53 30 1.8
8 38 28.8	8.0	39 47.82	39 36.4	21 3.95	- 9.60	+0 3.96	+ 8.36	-1.53	-13.30	8 39 54.54	49 53 48.3
8 41 9.9	8.8	42 31.94	42 3.4	15 55.45	-25.25	+0 3.95	+11.53	-1.63	-13.70	8 42 38.68	52 58 43.8
8 42 49.1	9.0	44 7.58	43 42.6	23 55.50	-20.65	+0 3.96	+ 9.23	-1.57	-13.10	8 44 14.28	50 50 46.5
8 43 6.7	9.4	44 25.38	44 37.9	25 19.55	+10.33	+0 3.96	+ 9.28	-1.57	-13.00	8 44 32.08	50 49 53.6
8 44 24.2	7.0	45 43.48	45 23.8	58 48.20	-15.42	+0 3.95	+12.04	-1.68	-13.60	8 45 50.16	53 16 1.2
8 45 37.6	8.7	46 58.54	46 18.9	42 33.60	-30.84	+0 3.95	+12.02	-1.70	-13.60	8 47 5.21	53 32 0.3
8 47 26.1	9.6	48 47.96	48 32.9	5 29.35	-11.84	+0 3.95	+11.89	-1.71	-13.50	8 48 54.59	53 9 23.4
8 49 42.9	8.1	51 4.72	50 37.9	25 51.70	-20.70	+0 3.97	+12.49	-1.75	-13.50	8 51 11.35	53 48 52.6
ZONE 292, APRIL 2, 1874.											
8 19 4.5	9.0	20 23.04	20 3.4	37 56.65	-15.92	+0 6.51	+10.24	-1.28	-14.80	8 20 32.72	51 36 50.6
8 22 23.3	9.0	23 44.82	23 18.6	24 52.95	-21.18	+0 6.51	+10.42	-1.33	-14.60	8 23 54.45	51 49 49.2
8 24 28.5	7.8	25 48.30	25 21.1	37 7.60	-21.60	+0 6.52	+11.32	-1.38	-14.80	8 25 57.92	52 37 34.7
8 25 30.8	9.1	26 49.92	26 26.9	38 0.85	-18.27	+0 6.51	+11.36	-1.38	-14.90	8 26 59.52	52 36 44.6
8 26 45.4	9.1	28 7.26	27 52.8	5 42.00	-11.38	+0 6.51	+12.06	-1.42	-14.90	8 28 16.84	53 9 11.0
8 28 14.0	7.0	29 32.54	29 6.6	53 6.40	-20.22	+0 6.52	+12.17	-1.44	-15.00	8 29 42.11	53 21 37.6
8 30 2.8	9.2	31 20.86	30 46.3	58 5.25	-28.93	+0 6.52	+ 8.52	-1.35	-13.90	8 31 30.37	50 16 27.4
8 31 17.0	8.9	32 35.18	32 21.7	28 33.75	-10.44	+0 6.51	+12.76	-1.48	-14.80	8 32 44.72	53 46 20.7
8 33 5.5	9.0	34 23.40	33 55.2	24 11.45	-22.79	+0 6.53	+10.41	-1.44	-14.10	8 34 32.89	51 50 28.8
8 35 8.0	8.4	36 28.82	36 1.1	52 42.05	-21.11	+0 6.52	+13.29	-1.55	-14.80	8 36 38.31	54 22 2.0
8 35 55.8	9.0	37 13.50	36 56.9	44 50.90	-13.42	+0 6.52	+12.43	-1.53	-14.50	8 37 22.96	53 30 0.2
8 36 59.2	9.0	38 18.14	37 59.5	23 44.00	-14.01	+0 6.53	+14.02	-1.58	-14.80	8 38 27.63	54 51 7.7
8 38 0.2	8.3	39 17.98	38 48.6	51 28.55	-22.94	+0 6.52	+12.15	-1.54	-14.40	8 39 27.41	53 23 12.7
8 39 0.8	9.5	40 17.92	39 55.1	19 15.95	-19.20	+0 6.52	+ 8.37	-1.43	-13.50	8 40 27.30	49 55 26.1
8 40 26.6	8.2	41 42.56	41 15.8	26 12.25	-22.63	+0 6.51	+ 8.32	-1.47	-13.40	8 41 51.88	49 48 26.3
8 42 49.1	9.0	44 5.08	43 51.7	24 6.50	-11.07	+0 6.53	+ 9.44	-1.50	-13.30	8 44 14.42	50 50 44.7
8 43 6.7	9.3	44 22.92	44 21.1	25 10.25	- 1.49	+0 6.52	+ 9.45	-1.50	-13.30	8 44 32.25	50 49 50.5
8 44 22.1	7.8	45 38.70	45 21.5	49 11.50	-13.41	+0 6.52	+12.35	-1.61	-14.00	8 45 48.03	53 25 39.4
8 45 52.3	9.2	47 17.16	47 4.6	32 48.40	- 9.53	+0 6.52	+13.81	-1.68	-14.40	8 47 26.48	54 42 7.4
8 47 26.1	9.7	48 45.48	48 27.5	5 26.80	-14.12	+0 6.52	+12.05	-1.63	-13.80	8 48 54.76	53 9 23.1
8 48 37.2	8.3	49 56.84	49 38.5	21 9.95	-13.77	+0 6.52	+14.03	-1.72	-14.20	8 50 6.11	54 53 41.8
8 50 43.1	9.0	51 59.36	51 36.3	51 23.45	-19.27	+0 6.53	+ 8.83	-1.55	-12.90	8 52 8.59	50 23 18.8
8 51 52.2	9.8	53 10.44	52 41.3	46 58.90	-23.20	+0 6.52	+11.11	-1.65	-13.30	8 53 19.65	52 27 41.2
8 52 27.8	7.9	53 44.34	53 34.9	28 10.35	- 7.44	+0 6.54	+11.67	-1.67	-13.40	8 53 53.56	52 46 46.0
8 54 27.8	9.6	55 43.50	55 9.7	25 58.60	-28.54	+0 6.52	+ 8.21	-1.61	-12.80	8 55 52.62	49 48 33.6
8 55 11.8	9.4	56 31.84	56 25.0	53 37.55	- 5.18	+0 6.54	+13.50	-1.77	-13.90	8 56 41.02	54 21 22.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
8 56 21.3	6.9	57 37.64	57 19.4	46 5.60	-14.16	+0 6.53	+12.42	-1.73	-13.40	8 57 46.80	53 28 44.5
8 57 39.5	8.7	58 59.10	58 37.1	29 12.30	-17.02	+0 6.54	+12.67	-1.76	-13.30	8 59 8.25	53 45 35.2
8 58 59.1	9.4	0 16.58	59 58.6	59 28.30	-14.41	+0 6.53	+11.02	-1.71	-12.90	9 0 25.69	52 15 20.5
8 59 49.2	8.8	1 6.09	1 1.5	18 49.60	-3.71	+0 6.54	+10.84	-1.70	-12.70	9 1 15.20	51 56 9.8
9 1 22.9	9.0	2 41.06	2 12.2	0 29.70	-22.63	+0 6.52	+11.99	-1.77	-13.10	9 2 50.13	53 14 11.5
9 3 6.9	9.1	4 24.34	3 57.7	42 2.55	-20.67	+0 6.54	+12.38	-1.79	-13.00	9 4 33.42	53 32 41.0
9 4 27.1	8.0	5 41.90	5 7.6	1 23.85	-26.87	+0 6.52	+11.89	-1.80	-12.80	9 5 50.92	53 13 13.1
9 4 29.0	8.0	5 43.76	5 22.8	1 23.85	-16.45	+0 6.52	+12.07	-1.80	-12.80	9 5 52.78	53 13 23.7
9 6 1.2	9.0	7 17.64	6 47.1	7 32.85	-23.94	+0 6.54	+11.83	-1.81	-12.70	9 7 26.66	53 7 7.0
9 6 59.8	8.5	8 14.96	7 52.8	24 15.45	-17.94	+0 6.53	+10.50	-1.76	-12.20	9 8 23.96	51 50 29.5
9 8 43.8	9.2	10 1.42	9 26.9	36 58.95	-26.12	+0 6.54	+13.52	-1.90	-13.20	9 10 10.41	54 37 39.7
9 9 52.7	8.5	11 7.26	10 39.8	13 20.45	-22.63	+0 6.53	+9.49	-1.75	-12.50	9 11 16.22	51 1 18.3
9 11 28.5	8.6	12 45.70	12 11.3	57 43.75	-26.27	+0 6.55	+13.10	-1.91	-13.30	9 12 54.65	54 16 54.1
9 12 37.7	8.7	13 50.74	13 14.3	6 32.40	-29.88	+0 6.54	+9.44	-1.78	-11.80	9 13 59.67	51 7 59.6
9 12 37.7	8.5	13 53.04	13 17.2	6 32.40	-29.38	+0 6.54	+9.44	-1.78	-11.80	9 14 1.97	51 8 0.1
9 13 38.0	9.7	14 53.90	14 35.5	24 1.60	-14.87	+0 6.55	+10.59	-1.82	-11.90	9 15 2.82	51 50 46.4
9 14 42.2	8.0	15 58.98	16 11.8	19 46.25	+9.86	+0 6.54	+12.94	-1.92	-12.40	9 16 7.87	53 55 28.3
9 15 44.7	9.3	16 59.24	16 40.7	10 4.25	-15.21	+0 6.55	+9.65	-1.81	-11.60	9 17 8.13	51 4 42.7
9 16 16.7	9.5	17 31.04	17 39.0	21 13.25	+6.46	+0 6.54	+10.68	-1.85	-11.80	9 17 39.91	51 53 56.2
9 18 15.5	9.2	19 32.84	19 6.0	34 38.00	-20.27	+0 6.54	+13.66	-2.00	-12.40	9 19 41.67	54 40 6.9
9 19 32.4	8.3	20 48.56	20 25.2	34 23.00	-17.70	+0 6.56	+13.71	-2.01	-12.30	9 20 57.39	54 40 24.6
9 20 36.9	9.2	21 54.38	21 25.1	37 51.75	-22.19	+0 6.54	+13.58	-2.02	-12.20	9 22 3.17	54 36 51.3
9 21 47.2	9.4	23 2.20	22 34.1	48 6.80	-23.41	+0 6.55	+8.82	-1.84	-11.00	9 23 11.01	50 26 31.4
9 22 54.7	9.0	24 6.48	23 46.5	33 5.95	-16.57	+0 6.54	+9.22	-1.86	-11.00	9 24 15.26	50 41 39.4
9 24 8.2	6.5	25 24.62	24 55.1	38 45.05	-22.36	+0 6.55	+13.56	-2.06	-12.00	9 25 33.36	54 35 57.8
ZONE 293, APRIL 6, 1874.											
8 22 23.3	9.1	23 41.28	23 38.5	25 9.85	-2.26	+0 9.72	+10.53	-1.23	-15.00	8 23 54.22	51 49 51.0
8 24 28.5	8.0	25 44.80	25 23.2	37 12.15	-17.15	+0 9.73	+11.29	-1.27	-15.20	8 25 57.74	52 37 34.2
8 25 30.8	9.0	26 46.44	26 17.3	37 55.25	-23.12	+0 9.72	+11.18	-1.28	-15.30	8 26 59.35	52 36 44.9
8 26 45.4	9.0	28 3.84	27 29.3	5 25.65	-27.06	+0 9.72	+11.74	-1.31	-15.30	8 28 16.74	53 9 11.0
8 28 14.0	6.9	29 29.12	28 52.9	52 58.15	-28.26	+0 9.72	+11.91	-1.33	-15.40	8 29 42.01	53 21 37.3
8 30 2.8	9.2	31 17.32	30 48.1	58 8.90	-24.41	+0 9.73	+8.53	-1.26	-14.40	8 31 30.13	50 16 27.9
3 31 17.0	8.6	32 31.80	32 3.1	28 20.95	-22.24	+0 9.72	+12.49	-1.38	-15.30	8 32 44.65	53 46 21.0
8 35 8.0	8.4	36 25.48	36 43.5	53 15.75	+13.72	+0 9.73	+13.30	-1.44	-15.30	8 36 38.29	54 22 2.7
8 38 0.2	8.5	39 14.58	38 42.9	51 25.05	-24.73	+0 9.73	+12.01	-1.44	-14.80	8 39 27.32	53 23 14.0
8 39 0.8	9.5	40 14.60	39 56.6	19 20.60	-15.16	+0 9.73	+8.33	-1.35	-14.10	8 40 27.27	49 55 24.9
8 42 49.1	8.8	44 1.64	.....	.....	.....	+0 9.74	.....	-1.41	.....	8 44 14.28	.....
8 43 6.7	8.7	44 19.40	44 21.6	25 9.75	+1.82	+0 9.73	+9.43	-1.40	-13.80	8 44 32.04	50 49 53.9
8 44 22.1	7.3	45 35.26	45 19.4	49 12.35	-12.40	+0 9.73	+12.24	-1.51	-14.60	8 45 47.90	53 25 39.0
8 45 52.3	8.9	47 13.74	47 0.3	32 46.40	-10.13	+0 9.73	+13.70	-1.58	-15.00	8 47 26.37	54 42 8.2
8 47 26.1	9.4	48 42.02	48 17.6	5 20.30	-19.14	+0 9.73	+11.90	-1.53	-14.30	8 48 54.61	53 9 24.1
8 48 37.2	8.0	49 53.44	49 26.5	21 2.85	-20.23	+0 9.73	+13.84	-1.62	-14.70	8 50 6.02	54 53 41.9
8 50 43.1	9.1	51 55.86	51 26.7	51 17.00	-24.35	+0 9.74	+8.67	-1.45	-13.40	8 52 8.40	50 23 19.6
8 51 52.2	9.6	53 7.06	52 32.6	46 52.10	-27.50	+0 9.73	+10.93	-1.56	-13.80	8 53 19.57	52 27 43.2
8 52 27.8	7.6	53 40.98	53 27.9	28 6.75	-10.37	+0 9.75	+11.54	-1.57	-13.90	8 53 53.51	52 46 46.1
8 54 27.8	9.8	55 40.10	55 12.0	26 3.85	-22.88	+0 9.73	+8.27	-1.52	-13.30	8 55 52.52	49 48 33.7
8 55 11.8	8.5	56 28.42	56 52.9	54 0.25	+18.68	+0 9.75	+13.25	-1.66	-14.50	8 56 40.92	54 21 22.6
8 56 21.3	7.8	57 34.26	57 54.2	46 34.05	+15.50	+0 9.74	+12.31	-1.63	-13.90	8 57 46.73	53 28 45.2
8 57 39.5	8.8	58 55.74	58 40.3	29 16.95	-11.91	+0 9.75	+12.63	-1.66	-13.90	8 59 8.20	53 45 35.1
8 58 59.1	9.5	0 13.06	59 37.2	59 13.25	-28.75	+0 9.74	+10.66	-1.55	-13.40	9 0 25.54	52 15 20.4
8 59 49.2	8.3	1 2.70	0 44.0	18 37.35	-15.08	+0 9.75	+10.54	-1.61	-13.50	9 1 15.11	51 56 9.7
9 1 22.9	8.8	2 37.52	2 26.6	0 43.00	-8.46	+0 9.73	+12.10	-1.68	-13.50	9 2 49.89	53 14 12.2

R. A. 1855.0 According to B. D.			Obs. Magn.	Mean of R. A. Wires.		Mean of Dec. Wires.		Mean of Circle Readings.		Red. to Horiz. Wire.	Sum of Reductions.			Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.				
											R. A.		Dec.	R. A.	Dec.						
h	m	s		m	s	m	s	'	"	"	m	s	"	s	"	h	m	s	°	'	"
9	3	6.9	8.9	4	20.84	3	54.6	42	1.65	-20.36	+0	9.75	+12.31	-1.70	-13.50	9	4	33.22	53	32	41.7
9	4	27.1	7.7	5	38.50	4	49.9	1	10.70	-38.07	+0	9.73	+11.49	-1.71	-13.30	9	5	50.82	53	13	14.3
9	4	29.0	7.9	5	40.44	5	4.4	1	10.70	-28.20	+0	9.73	+11.77	-1.71	-13.30	9	5	52.76	53	13	24.4
9	6	1.2	8.9	7	14.12	6	43.4	7	30.60	-24.10	+0	9.75	+11.73	-1.71	-13.20	9	7	26.45	53	7	8.6
9	6	59.8	8.9	8	11.62	7	44.9	24	11.50	-21.58	+0	9.74	+10.34	-1.67	-12.80	9	8	23.92	51	50	29.2
9	8	43.8	9.3	9	58.02	9	23.6	36	58.60	-26.05	+0	9.75	+13.45	-1.81	-13.80	9	10	10.31	54	37	39.6
9	9	52.7	8.2	11	3.88	10	27.7	13	12.65	-29.79	+0	9.74	+ 9.28	-1.66	-13.00	9	11	16.14	51	1	18.4
9	11	28.5	8.0	12	42.32	12	1.4	57	36.50	-31.23	+0	9.76	+12.86	-1.82	-13.80	9	12	54.57	54	16	55.8
9	12	37.7	8.9	13	47.48	13	17.5	6	37.30	-24.62	+0	9.75	+ 9.50	-1.69	-12.30	9	13	59.71	51	7	59.6
9	12	37.7	9.2	13	49.76	13	20.8	6	37.30	-23.80	+0	9.75	+ 9.52	-1.69	-12.30	9	14	1.99	51	8	0.5
9	13	38.0	9.5	14	50.55	.....	.....	.....	.....	.....	+0	9.76	.....	-1.73	.....	9	15	2.77	.....	.....	.....
9	14	42.2	8.3	15	55.64	15	30.6	19	15.15	-19.26	+0	9.75	+12.72	-1.83	-13.00	9	16	7.83	53	55	29.6
9	15	44.7	9.5	16	55.92	16	44.0	10	7.90	- 9.78	+0	9.76	+ 9.67	-1.73	-12.10	9	17	8.10	51	4	44.1
9	18	15.5	9.0	19	29.46	18	57.6	34	33.65	-24.13	+0	9.75	+13.47	-1.91	-13.00	9	19	41.59	54	40	6.7
9	19	32.4	8.3	20	45.20	20	19.1	34	19.75	-19.73	+0	9.77	+13.57	-1.92	-12.90	9	20	57.33	54	40	25.2
9	20	36.9	8.3	21	51.06	21	34.7	38	0.75	-12.42	+0	9.75	+13.64	-1.93	-12.80	9	22	3.15	54	36	51.6
9	21	47.2	9.2	22	58.78	22	43.0	48	16.95	-13.16	+0	9.76	+ 8.89	-1.75	-11.50	9	23	10.89	50	26	31.1
9	22	54.7	9.0	24	3.06	23	32.0	32	56.35	-25.94	+0	9.75	+ 9.18	-1.78	-11.50	9	24	15.13	50	41	39.2
9	24	8.2	6.7	25	21.20	25	2.4	38	52.95	-14.25	+0	9.76	+13.56	-1.97	-12.60	9	25	33.24	54	35	57.5
ZONE 294, APRIL 16, 1874.																					
9	29	56.4	8.0	30	59.04	30	51.4	28	52.00	- 5.74	+0	19.43	+12.63	-1.76	-13.30	9	31	20.90	54	3	50.8
9	31	0.9	9.0	32	3.20	31	51.3	3	51.25	- 8.90	+0	19.43	+13.12	-1.77	-13.40	9	32	25.06	54	28	48.8
9	32	18.6	9.4	33	21.08	33	10.0	30	9.35	- 8.19	+0	19.43	+12.77	-1.65	-13.90	9	33	43.03	54	2	30.4
9	33	19.1	8.8	34	18.54	34	11.6	51	46.25	- 5.26	+0	19.43	+12.29	-1.77	-13.10	9	34	40.35	53	40	56.7
9	34	46.5	9.1	35	47.06	35	25.6	10	43.05	-16.53	+0	19.43	+11.92	-1.77	-12.90	9	36	8.85	53	21	48.4
9	41	17.1	8.4	42	16.94	42	6.7	56	17.65	- 7.98	+0	19.45	+11.11	-1.79	-12.30	9	42	38.66	52	36	21.8
9	42	17.7	8.4	43	18.74	42	58.4	22	7.00	-16.03	+0	19.45	+10.56	-1.79	-12.10	9	43	40.44	52	10	24.0
9	43	8.7	8.5	44	9.28	43	58.2	22	20.70	- 8.57	+0	19.43	+11.74	-1.84	-12.40	9	44	30.94	53	10	18.6
9	44	19.7	9.2	45	18.22	44	53.2	15	34.65	-20.13	+0	19.45	+ 9.52	-1.77	-11.70	9	45	39.89	51	16	51.5
10	9	45.9	6.9	10	40.62	10	22.0	30	44.90	-14.41	+0	19.45	+10.44	-2.02	-10.30	10	11	1.91	52	1	48.2
10	10	52.1	8.5	11	49.96	11	32.6	8	23.65	-13.04	+0	19.44	+13.03	-2.16	-10.80	10	12	11.16	54	24	12.9
10	14	33.4	8.8	15	31.10	15	3.0	52	21.00	-21.44	+0	19.44	+12.09	-2.15	-10.40	10	15	52.26	53	40	6.4
10	15	39.6	9.4	16	35.10	16	17.3	43	57.50	-14.17	+0	19.46	+10.15	-2.07	- 9.80	10	16	56.30	51	48	35.8
10	16	49.2	8.7	17	44.10	17	21.4	17	8.00	-17.49	+0	19.44	+11.74	-2.14	-10.10	10	18	5.24	53	15	23.3
10	18	22.8	8.9	19	21.14	18	43.6	17	7.55	-28.89	+0	19.44	+11.51	-2.16	-10.00	10	19	42.25	53	15	12.1
10	19	38.2	9.4	20	32.52	20	2.7	0	27.40	-22.80	+0	19.44	+11.98	-2.18	-10.00	10	20	53.61	53	31	58.8
10	20	49.1	9.1	21	45.84	21	14.0	14	54.20	-24.49	+0	19.44	+11.64	-2.18	- 9.80	10	22	6.91	53	17	30.1
10	22	1.7	8.8	22	55.98	22	28.2	5	32.35	-21.81	+0	19.46	+10.80	-2.15	- 9.50	10	23	17.07	52	26	54.1
10	23	35.0	9.5	24	29.18	23	59.8	3	7.25	-23.06	+0	19.46	+10.78	-2.15	- 9.40	10	24	50.27	52	29	17.9
10	24	30.3	8.5	25	25.46	25	9.5	41	2.00	-12.15	+0	19.44	+12.52	-2.24	- 9.80	10	25	46.46	53	51	35.4
10	25	27.8	9.2	26	24.82	27	3.2	46	9.80	+29.22	+0	19.44	+12.33	-2.24	- 9.70	10	26	45.81	53	47	8.8
10	27	18.0	8.2	28	12.08	27	47.5	47	10.50	-19.17	+0	19.46	+11.18	-2.20	- 9.20	10	28	33.09	52	45	19.0
10	28	57.8	8.5	29	52.20	29	15.2	40	48.95	-28.08	+0	19.44	+12.21	-2.28	- 9.40	10	30	13.13	53	51	32.4
10	30	4.8	6.0	30	58.84	30	30.3	13	16.75	-21.40	+0	19.44	+12.82	-2.31	- 9.40	10	31	19.74	54	19	11.9
10	32	19.8	7.8	33	14.62	32	42.5	55	4.35	-24.52	+0	19.44	+12.05	-2.29	- 9.00	10	33	35.51	53	37	20.8
10	33	27.8	9.5	34	22.74	33	56.3	48	10.45	-19.62	+0	19.44	+13.34	-2.36	- 9.20	10	34	43.58	54	44	20.6
10	34	48.8	9.3	35	43.08	35	19.8	44	43.10	-17.72	+0	19.44	+12.25	-2.32	- 8.90	10	36	3.93	53	47	49.0
10	35	51.2	8.7	36	40.98	37	9.0	27	26.45	+23.13	+0	19.46	+ 8.15	-2.13	- 7.90	10	37	1.95	50	5	43.4
10	37	10.8	8.9	38	2.52	37	39.6	27	42.05	-18.93	+0	19.46	+ 8.19	-2.14	- 7.80	10	38	23.47	50	4	45.8

ZONE 295, APRIL 22, 1874.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
9 29 56.4	8.3	30 52.44	30 14.8	28 31.50	-28.41	+0 25.76	+12.12	-1.60	-13.90	9 31 20.79	54 3 51.8
9 31 0.9	8.7	31 56.58	31 34.6	3 45.00	-16.46	+0 25.76	+12.80	-1.62	-14.10	9 32 24.92	54 28 50.7
9 31 44.4	9.1	32 42.18	32 29.0	26 34.55	-9.96	+0 25.76	+12.63	-1.65	-13.90	9 33 10.47	54 6 7.6
9 33 19.1	8.5	34 11.92	33 57.4	51 41.45	-11.08	+0 25.76	+12.08	-1.62	-13.70	9 34 40.21	53 40 59.2
9 34 46.5	8.4	35 40.52	35 7.8	10 35.95	-25.13	+0 25.76	+11.59	-1.62	-13.60	9 36 8.79	53 21 50.2
9 35 53.3	8.9	36 47.16	36 20.8	3 36.00	-20.70	+0 25.77	+10.58	-1.60	-13.30	9 37 15.42	52 28 53.8
9 36 36.3	9.5	37 32.70	37 20.9	10 59.45	-9.10	+0 25.76	+11.79	-1.65	-13.50	9 38 0.93	53 21 42.9
9 37 55.1	9.1	38 47.94	38 22.7	0 35.20	-20.18	+0 25.77	+9.58	-1.59	-12.90	9 39 16.16	51 31 54.4
9 40 23.5	7.5	41 16.56	40 47.1	32 57.95	-23.15	+0 25.77	+9.96	-1.63	-12.90	9 41 44.74	51 59 29.0
9 41 17.1	8.6	42 10.26	41 48.4	56 10.45	-17.12	+0 25.77	+10.82	-1.65	-13.00	9 42 38.44	52 36 23.2
9 42 17.7	8.7	43 12.28	.....	.....	.....	+0 25.77	.....	-1.65	.....	9 43 40.44	.....
9 43 8.7	8.6	44 2.82	43 43.6	22 17.15	-14.82	+0 25.76	+11.49	-1.69	-13.00	9 44 30.96	53 10 19.4
9 44 19.7	8.7	45 11.78	44 45.9	15 36.25	-20.86	+0 25.78	+9.30	-1.64	-12.40	9 45 39.91	51 16 52.6
9 45 26.9	10.0	46 19.23	46 11.1	38 33.95	-6.41	+0 25.78	+10.03	-1.67	-12.60	9 46 47.35	51 54 9.8
9 46 37.3	6.9	47 30.58	47 0.9	42 27.00	-22.02	+0 25.77	+13.14	-1.79	-13.40	9 47 58.67	54 50 3.4
9 51 1.6	8.7	51 54.78	51 29.8	52 30.85	-19.07	+0 25.77	+11.93	-1.80	-13.40	9 52 22.78	53 40 1.1
9 52 27.1	8.3	53 20.10	52 51.9	33 36.90	-21.86	+0 25.78	+11.11	-1.78	-12.50	9 53 48.10	52 58 52.3
9 54 2.6	9.2	54 57.04	54 42.4	42 23.10	-11.09	+0 25.77	+12.24	-1.83	-12.60	9 55 25.00	53 50 17.8
9 58 44.8	8.5	59 35.80	58 53.9	51 12.05	-31.95	+0 25.78	+11.91	-1.87	-11.90	10 0 3.69	53 41 8.1
9 59 45.0	9.6	0 40.74	0 11.3	4 45.45	-22.54	+0 25.78	+11.57	-1.87	-12.20	10 1 8.62	53 27 43.5
10 1 3.5	9.1	1 56.84	1 27.8	53 14.65	-22.13	+0 25.78	+11.82	-1.89	-12.10	10 2 24.69	53 39 15.0
10 2 29.1	9.3	3 22.22	2 54.3	26 38.85	-21.07	+0 25.78	+12.43	-1.93	-12.20	10 3 50.04	54 5 52.3
10 2 58.1	8.5	3 50.10	3 45.5	26 38.85	-3.47	+0 25.78	+12.63	-1.93	-12.20	10 4 17.92	54 6 10.1
10 3 26.6	8.8	4 18.68	4 22.2	26 52.45	+2.64	+0 25.78	+12.61	-1.93	-12.10	10 4 46.49	54 6 2.6
10 4 29.5	9.0	5 22.48	.....	.....	.....	+0 25.78	.....	-1.90	.....	10 5 50.28	.....
10 6 39.6	9.2	7 30.14	7 3.2	8 28.65	-21.61	+0 25.79	+9.34	-1.85	-11.30	10 7 57.94	51 23 59.6
10 8 10.1	8.6	9 1.54	8 32.7	38 53.00	-22.38	+0 25.79	+10.98	-1.93	-11.50	10 9 29.29	52 53 35.8
10 9 45.9	6.3	10 34.00	10 0.3	30 35.90	-26.09	+0 25.79	+10.02	-1.88	-11.00	10 11 1.77	52 1 48.7
10 10 52.1	6.8	11 43.32	11 13.6	8 16.45	-22.26	+0 25.78	+12.68	-2.03	-11.80	10 12 10.99	54 24 13.8
10 12 10.4	9.3	13 0.42	12 24.2	48 9.10	-26.91	+0 25.78	+12.94	-2.04	-11.80	10 13 28.08	54 44 16.7
10 13 29.8	9.4	14 21.40	13 50.1	54 52.45	-22.76	+0 25.78	+13.86	-2.06	-11.93	10 14 49.01	54 37 38.3
10 14 33.4	9.1	15 24.68	15 2.9	52 26.85	-16.63	+0 25.79	+11.95	-2.02	-11.30	10 15 52.32	53 40 8.6
10 15 39.6	9.8	16 28.58	16 23.4	44 9.10	-4.14	+0 25.80	+10.00	-1.93	-10.70	10 16 56.26	51 48 37.5
10 16 49.2	8.5	17 37.56	17 23.0	17 15.90	-11.24	+0 25.79	+11.61	-2.02	-11.30	10 18 5.17	53 15 24.6
10 18 22.8	8.8	19 14.68	18 54.1	17 21.20	-15.87	+0 25.79	+11.54	-2.03	-11.00	10 19 42.27	53 15 14.8
10 19 38.2	9.1	20 26.08	19 59.9	0 31.80	-20.05	+0 25.79	+11.87	-2.05	-10.90	10 20 53.65	53 32 0.4
10 20 49.1	9.2	21 39.44	21 10.1	14 59.40	-22.55	+0 25.79	+11.40	-2.05	-11.80	10 22 6.99	53 17 28.9
10 22 1.7	8.4	22 49.54	22 14.8	5 28.50	-27.23	+0 25.80	+10.50	-2.02	-11.50	10 23 17.10	52 26 54.5
10 23 35.0	8.6	24 22.56	23 55.9	3 11.50	-20.94	+0 25.80	+10.57	-2.03	-11.40	10 24 50.11	52 29 17.9
10 24 30.3	8.5	25 18.96	24 54.9	40 55.90	-18.30	+0 25.79	+12.25	-2.11	-11.70	10 25 46.44	53 51 37.5
10 25 27.8	8.8	26 18.32	26 2.3	45 29.15	-12.17	+0 25.79	+12.28	-2.11	-11.60	10 26 45.79	53 47 10.4
10 26 24.1	8.0	27 13.08	26 56.4	7 34.75	-12.50	+0 25.79	+12.88	-2.15	-10.70	10 27 40.52	54 25 6.0
10 27 18.0	7.1	28 5.68	28 13.9	47 38.65	+6.39	+0 25.80	+11.09	-2.07	-10.20	10 28 33.16	52 45 19.6
10 28 57.8	8.8	29 45.68	29 19.0	41 0.00	-20.28	+0 25.79	+12.22	-2.15	-11.40	10 30 13.09	53 51 31.5
10 30 4.8	5.5	30 52.46	30 23.2	13 17.95	-22.00	+0 25.79	+12.61	-2.19	-11.40	10 31 19.83	54 19 12.2
10 31 7.6	9.8	31 54.30	31 36.2	17 11.75	-14.90	+0 25.80	+8.24	-1.98	-9.20	10 32 21.79	50 15 23.3
10 32 19.8	6.9	33 8.15	32 42.3	55 11.85	-19.78	+0 25.79	+11.98	-2.17	-10.00	10 33 35.51	53 37 21.2
10 33 27.8	9.0	34 16.24	33 39.9	48 4.65	-26.97	+0 25.80	+13.00	-2.23	-10.20	10 34 43.57	54 44 22.0
10 34 48.8	9.4	35 36.56	35 5.7	44 38.75	-23.51	+0 25.80	+11.95	-2.19	-9.90	10 36 3.90	53 47 50.6
10 35 51.2	8.0	36 34.62	36 15.7	26 49.60	-15.61	+0 25.81	+8.06	-2.02	-8.80	10 37 2.05	50 5 44.8
10 36 56.2	9.1	37 40.72	37 10.3	24 15.15	-25.09	+0 25.81	+8.02	-2.03	-8.80	10 38 8.13	50 8 9.7
10 39 16.6	9.7	40 2.80	39 32.7	57 2.95	-24.61	+0 25.81	+8.47	-2.05	-8.70	10 40 30.18	50 35 22.8

ZONE 296, MAY 7, 1874.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
11 11 28.6	8.8	11 56.70	11 47.5	21 19.55	- 7.58	+0 38.71	+ 8.31	-2.01	- 8.70	11 12 36.80	50 11 21.2
11 12 47.6	7.8	13 15.26	12 51.0	5 35.60	-19.07	+0 38.70	+10.68	-2.13	- 9.80	11 13 55.25	52 26 54.9
11 13 35.8	8.9	14 6.58	13 47.6	18 4.35	-14.64	+0 38.68	+11.49	-2.16	- 9.90	11 14 46.52	53 14 31.3
11 15 27.1	8.7	15 54.72	15 26.5	22 4.10	-22.27	+0 38.70	+10.27	-2.13	- 9.50	11 16 34.69	52 10 23.1
11 16 24.5	9.1	16 54.64	16 34.3	53 18.15	-15.12	+0 38.68	+13.04	-2.24	-10.10	11 17 34.50	54 39 18.3
11 18 2.2	9.6	18 30.62	18 0.8	18 29.15	-22.43	+0 38.68	+12.42	-2.24	- 9.90	11 19 10.46	54 13 59.6
11 21 12.4	9.6	21 39.34	21 16.0	33 6.75	-19.29	+0 38.71	+ 7.88	-2.08	- 8.60	11 22 19.30	49 59 21.8
11 22 25.0	8.7	22 51.62	22 25.6	13 55.10	-20.01	+0 38.68	+11.42	-2.22	- 9.30	11 23 31.44	53 18 35.6
11 24 37.6	9.4	25 4.98	24 37.6	26 2.50	-22.63	+0 38.71	+ 8.05	-2.10	- 8.50	11 25 44.90	50 6 23.0
11 25 15.9	8.6	25 43.36	25 23.1	23 43.40	-16.71	+0 38.71	+ 8.05	-2.11	- 8.30	11 26 23.27	50 8 48.2
11 26 40.3	8.6	27 7.06	26 40.9	6 53.55	-20.57	+0 38.70	+10.58	-2.21	- 8.90	11 27 46.87	52 25 36.1
11 27 44.9	9.0	28 11.44	27 50.4	8 52.15	-17.24	+0 38.71	+ 8.31	-2.13	- 8.30	11 28 51.31	50 23 39.1
11 29 7.9	9.0	29 32.22	29 4.9	15 7.10	-22.46	+0 38.71	+ 8.30	-2.14	- 8.90	11 30 12.07	50 17 18.3
11 30 7.9	9.0	30 34.60	30 7.2	48 34.45	-21.37	+0 38.70	+10.80	-2.26	- 8.10	11 31 14.33	52 43 55.3
11 31 32.9	9.7	31 55.18	31 21.7	38 21.15	-27.78	+0 38.71	+ 7.71	-2.18	- 7.50	11 32 34.97	49 53 59.7
11 32 28.2	8.3	32 51.98	32 45.9	36 20.60	- 4.73	+0 38.69	+11.31	-2.28	- 8.00	11 33 31.67	52 56 26.4
11 33 37.5	9.6	34 4.28	33 54.6	59 15.90	- 7.42	+0 38.68	+11.83	-2.33	- 8.00	11 34 43.90	53 33 28.9
11 36 0.9	9.4	36 26.12	35 57.4	47 21.95	-23.38	+0 38.71	+ 8.64	-2.22	- 7.20	11 37 5.85	50 45 4.5
11 36 54.4	9.6	37 19.35	37 12.1	56 58.90	- 5.97	+0 38.71	+ 8.73	-2.21	- 7.10	11 37 59.08	50 35 45.2
11 38 3.7	9.6	38 28.56	38 49.3	59 39.50	+16.93	+0 38.71	+ 8.46	-2.22	- 7.00	11 39 8.27	50 33 27.3
11 39 15.7	9.7	39 41.54	40 6.1	34 21.90	+18.63	+0 38.68	+12.19	-2.40	- 7.80	11 40 21.05	53 58 49.5
11 43 3.1	9.0	43 27.90	42 55.7	22 14.85	-24.27	+0 38.68	+12.39	-2.43	- 7.50	11 44 7.35	54 10 14.1
11 44 36.9	9.6	44 58.58	44 51.7	9 42.85	- 5.17	+0 38.68	+12.76	-2.45	- 7.60	11 45 38.00	54 23 5.5
11 46 22.8	9.4	46 47.44	46 22.2	38 0.00	-20.89	+0 38.71	+ 7.92	-2.28	- 6.50	11 47 27.03	49 54 28.9
11 47 26.5	8.8	47 50.90	47 30.0	53 29.75	-16.32	+0 38.70	+10.79	-2.38	- 6.80	11 48 30.38	52 39 6.3
11 49 31.5	9.5	49 58.96	49 37.2	31 19.05	-16.49	+0 38.68	+12.43	-2.47	- 7.00	11 50 38.32	54 1 18.2
11 54 52.1	8.7	55 13.38	54 48.3	30 5.60	-19.88	+0 38.70	+10.29	-2.39	- 6.20	11 55 52.79	52 2 26.9

ZONE 297, MAY 11, 1874.

11 12 47.6	7.5	13 11.60	12 50.6	5 34.95	-16.48	+0 42.24	+10.83	-2.05	- 9.30	11 13 55.21	52 26 56.1
11 13 35.8	9.0	14 2.96	13 42.7	17 59.55	-15.64	+0 42.22	+11.59	-2.07	- 9.40	11 14 46.53	53 14 33.0
11 15 27.1	8.7	15 51.12	15 19.1	21 57.55	-25.27	+0 42.24	+10.32	-2.04	- 9.00	11 16 34.72	52 10 24.5
11 16 24.5	9.1	16 51.06	16 26.2	53 12.75	-18.55	+0 42.21	+13.12	-2.15	- 9.30	11 17 34.54	54 39 18.5
11 18 2.2	9.6	18 26.86	18 9.7	18 35.05	-12.94	+0 42.21	+12.69	-2.15	- 9.10	11 19 10.32	54 14 1.5
11 21 12.4	9.6	21 35.88	21 50.9	33 35.70	+12.42	+0 42.26	+ 8.04	-2.00	- 8.00	11 22 19.47	49 59 22.7
11 22 25.0	8.7	22 48.08	22 35.7	14 3.15	- 9.54	+0 42.22	+11.69	-2.15	- 8.70	11 23 31.51	53 18 36.2
11 24 37.6	9.2	25 1.42	24 38.5	26 3.25	-18.91	+0 42.26	+ 8.21	-2.02	- 8.00	11 25 44.97	50 6 23.9
11 25 15.9	9.0	25 39.76	25 36.4	23 55.15	- 2.81	+0 42.26	+ 8.24	-2.03	- 7.80	11 26 23.30	50 8 48.3
11 26 40.3	8.6	27 3.52	26 45.7	6 58.10	-13.98	+0 42.23	+10.79	-2.14	- 8.30	11 27 46.93	52 25 36.2
11 27 44.9	9.0	28 7.82	28 0.3	8 59.50	- 6.16	+0 42.24	+ 8.51	-2.05	- 7.70	11 28 51.30	50 23 41.0
11 29 7.9	8.9	29 28.60	29 13.8	15 14.85	-12.18	+0 42.25	+ 8.54	-2.06	- 7.40	11 30 12.07	50 17 19.9
11 30 7.9	9.0	30 30.98	30 15.6	48 40.75	-12.01	+0 42.22	+11.07	-2.18	- 8.70	11 31 14.31	52 43 55.4
11 31 32.9	9.2	31 51.72	31 23.5	38 22.65	-23.39	+0 42.25	+ 7.91	-2.10	- 8.10	11 32 35.13	49 53 59.5
11 32 28.2	8.5	32 48.42	32 33.1	36 11.00	-11.87	+0 42.22	+11.42	-2.20	- 8.60	11 33 31.72	52 56 25.7
11 33 37.5	9.2	34 0.84	33 39.6	59 4.55	-16.21	+0 42.21	+11.95	-2.24	- 8.60	11 34 44.08	53 33 28.3
11 36 0.9	8.8	36 22.54	35 44.8	47 13.25	-30.71	+0 42.24	+ 8.62	-2.14	- 7.80	11 37 5.88	50 45 2.6
11 36 56.0	9.0	37 17.90	36 55.3	54 22.65	-18.91	+0 42.24	+ 8.63	-2.13	- 7.70	11 38 1.24	50 38 5.1
11 38 3.7	9.1	38 25.00	38 16.6	59 11.75	- 6.87	+0 42.24	+ 8.68	-2.14	- 7.60	11 39 8.32	50 33 28.2
11 39 15.7	8.5	39 38.02	39 16.5	33 44.35	-16.28	+0 42.20	+12.47	-2.31	- 8.40	11 40 21.14	53 58 49.1
11 40 54.7	9.6	41 16.10	40 52.0	37 35.85	-18.27	+0 42.20	+12.28	-2.31	- 8.20	11 41 59.21	53 54 55.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s "	"	h m s	° ' "
11 43 3.1	9.0	43 24.32	42 58.9	22 17.00	-19.15	+0 42.20	+12.62	-2.35	- 8.20	11 44 7.37	54 10 13.9
11 44 36.9	9.0	44 55.04	44 20.0	9 19.00	-26.24	+0 42.20	+12.61	-2.37	- 8.20	11 45 38.06	54 23 4.8
11 46 22.8	9.1	46 43.94	46 26.5	38 3.75	-14.42	+0 42.25	+ 8.11	-2.21	- 7.10	11 47 27.14	49 54 28.5
11 47 26.5	8.4	47 47.26	47 27.2	53 27.30	-15.52	+0 42.23	+10.96	-2.30	- 7.50	11 48 30.35	52 39 6.3
11 49 31.5	9.2	49 55.32	49 25.1	31 11.70	-22.85	+0 42.20	+12.43	-2.39	- 7.70	11 50 38.28	54 1 15.8
*11 52 21.7	9.2	52 42.26	52 13.8	57 45.45	-22.30	+0 42.23	+10.82	-2.34	- 7.10	11 53 25.27	52 34 41.6
11 54 52.1	8.5	55 9.86	54 41.7	30 2.20	-22.34	+0 42.23	+10.38	-2.32	- 6.80	11 55 52.87	52 2 24.7
ZONE 298, MAY 12, 1874.											
11 35 58.4	7.5	36 20.26	36 20.7	27 30.95	+ 0.31	+0 43.44	+11.40	-2.22	- 8.60	11 37 4.73	53 5 18.5
11 36 49.6	9.2	37 12.92	37 0.4	11 14.20	- 9.38	+0 43.44	+12.83	-2.29	- 8.80	11 37 57.32	54 21 26.8
11 38 29.8	9.0	38 49.70	38 23.6	29 53.70	-20.21	+0 43.44	+11.05	-2.24	- 8.50	11 39 34.13	53 2 35.0
11 40 9.6	8.5	40 29.24	40 1.1	49 53.30	-21.42	+0 43.44	+11.75	-2.28	- 8.40	11 41 13.62	53 42 35.0
11 42 19.0	8.5	42 41.76	42 11.6	2 8.45	-22.57	+0 43.44	+12.82	-2.34	- 8.50	11 43 26.07	54 30 19.6
11 44 45.5	9.0	45 3.38	44 28.8	3 37.40	-25.88	+0 43.44	+12.57	-2.36	- 8.30	11 45 47.65	54 28 47.3
11 45 22.0	9.2	45 42.10	45 28.7	12 51.15	-10.06	+0 43.44	+12.70	-2.35	- 8.20	11 46 26.37	54 19 49.6
11 46 12.4	2.0	46 30.58	46 17.6	9 17.00	- 9.75	+0 43.44	+12.71	-2.37	- 8.20	11 47 14.83	54 23 24.1
11 47 57.1	9.6	48 16.66	47 45.5	39 40.30	-23.69	+0 43.44	+11.89	-2.35	- 7.90	11 49 0.91	53 52 46.3
11 49 20.8	8.4	49 38.82	49 6.2	34 20.95	-25.28	+0 43.44	+10.89	-2.31	- 7.60	11 50 23.10	52 58 3.3
11 50 32.7	8.6	50 50.44	50 22.4	39 37.25	-20.74	+0 43.44	+13.11	-2.42	- 8.00	11 51 34.60	54 52 53.4
11 51 37.5	9.7	51 55.90	51 43.4	7 56.15	-10.26	+0 43.47	+ 8.44	-2.21	- 6.80	11 52 40.28	50 24 41.5
11 52 22.7	9.2	52 42.36	52 29.6	39 16.20	- 9.71	+0 43.44	+12.11	-2.38	- 7.60	11 53 26.54	53 53 24.9
11 53 54.4	9.1	54 10.62	53 40.7	49 12.05	-22.24	+0 43.44	+12.94	-2.43	- 7.70	11 54 54.74	54 43 17.2
11 54 42.5	9.8	54 59.26	55 12.7	22 45.35	+10.35	+0 43.44	+11.43	-2.36	- 7.30	11 55 43.45	53 10 15.4
11 55 44.1	9.1	56 2.22	55 53.2	27 17.00	- 7.44	+0 43.47	+ 8.15	-2.22	- 6.50	11 56 46.57	50 5 23.5
11 57 7.4	9.1	57 23.98	56 57.1	36 25.20	-22.29	+0 43.47	+ 8.94	-2.26	- 6.50	11 58 8.28	50 56 1.2
11 57 36.8	9.0	57 54.50	57 45.5	36 12.40	- 7.14	+0 43.46	+10.24	-2.31	- 6.80	11 58 38.73	51 56 30.2
11 58 32.1	8.5	58 50.12	58 30.0	33 13.55	-16.29	+0 43.47	+ 9.00	-2.27	- 6.50	11 59 34.40	50 59 18.9
11 59 30.0	8.5	59 48.46	59 28.7	6 41.90	-15.55	+0 43.45	+10.64	-2.35	- 6.80	12 0 32.64	52 25 52.7
12 1 49.1	9.4	2 6.60	1 49.6	37 28.05	-13.80	+0 43.47	+ 8.99	-2.30	- 6.20	12 2 50.82	50 55 7.2
12 3 32.6	7.9	3 49.96	3 23.9	17 47.95	-21.04	+0 43.47	+ 9.23	-2.32	- 6.20	12 4 34.15	51 14 40.3
12 4 40.9	9.1	5 1.08	4 31.1	48 9.85	-23.92	+0 43.46	+ 9.65	-2.35	- 6.20	12 5 45.22	51 44 16.0
12 5 24.2	8.4	5 40.74	5 25.7	34 6.65	-12.16	+0 43.47	+ 9.05	-2.32	- 6.00	12 6 24.92	50 58 30.5
12 6 20.2	8.5	6 34.58	6 14.1	37 3.20	-15.54	+0 43.44	+12.23	-2.47	- 6.60	12 7 18.56	53 55 33.2
12 7 32.4	6.5	7 47.24	7 19.8	24 40.85	-20.68	+0 43.44	+12.24	-2.49	- 6.60	12 8 31.19	54 7 50.4
12 8 32.9	9.2	8 50.74	8 22.6	2 49.05	-23.02	+0 43.47	+ 8.37	-2.31	- 5.70	12 9 34.90	50 29 36.9
12 10 20.7	6.3	10 35.18	10 5.3	39 14.60	-22.69	+0 43.44	+11.94	-2.50	- 6.30	12 11 19.10	53 53 14.6
12 11 47.9	9.0	12 4.44	11 28.7	40 51.50	-28.39	+0 43.46	+ 9.84	-2.41	- 5.70	12 12 48.47	51 51 30.5
12 13 6.9	8.8	13 20.94	12 49.9	15 50.15	-23.31	+0 43.44	+12.55	-2.54	- 6.20	12 14 4.80	54 16 39.2
12 14 24.6	9.5	14 37.90	14 17.9	37 3.65	-16.23	+0 43.47	+ 9.05	-2.37	- 5.30	12 15 21.96	50 55 30.2
12 15 40.4	8.8	15 53.96	15 23.4	29 51.85	-23.14	+0 43.44	+12.08	-2.54	- 6.00	12 16 37.80	54 2 37.4
12 17 12.4	9.3	17 27.78	16 55.1	58 26.90	-24.41	+0 43.44	+12.73	-2.58	- 6.00	12 18 11.56	54 34 1.8
12 19 28.0	9.5	19 42.52	19 47.3	9 25.25	+ 3.86	+0 43.47	+ 9.49	-2.42	- 5.80	12 20 26.49	51 23 28.6
12 21 58.6	9.5	22 14.32	21 42.1	32 6.85	-26.08	+0 43.47	+ 8.99	-2.42	- 5.50	12 22 58.28	51 0 16.9
ZONE 299, MAY 14, 1874.											
11 35 58.4	7.8	36 18.64	36 29.4	27 44.65	+ 8.35	+0 44.99	+10.99	-2.18	- 8.90	11 37 4.70	53 5 17.1
11 36 49.6	9.0	37 11.36	37 6.5	11 24.95	- 3.68	+0 44.96	+12.43	-2.25	- 9.10	11 37 57.32	54 21 26.0
11 38 29.8	8.8	38 48.00	38 32.8	30 7.15	-11.77	+0 44.99	+11.03	-2.20	- 8.70	11 39 34.02	53 2 34.7
11 40 9.6	8.7	40 27.70	39 59.6	49 59.30	-21.42	+0 44.98	+11.34	-2.24	- 8.70	11 41 13.66	53 42 33.2

* 11 53 [25.27]

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
11 40 54.7	9.8	41 13.38	41 25.5	38 7.80	+ 9.18	+0 44.99	+11.79	-2.26	- 8.70	11 41 59.33	53 54 55.8
11 42 19.0	8.4	42 40.16	42 12.0	2 15.05	-21.57	+0 44.96	+12.44	-2.30	- 8.80	11 43 26.03	54 30 18.3
11 44 45.5	8.6	45 1.84	44 23.8	3 39.45	-28.42	+0 44.97	+12.09	-2.32	- 8.60	11 45 47.68	54 28 46.9
11 45 22.0	9.0	45 40.50	45 24.5	12 53.80	-12.01	+0 44.95	+12.26	-2.31	- 8.50	11 46 26.32	54 19 49.2
11 46 12.4	2.3	46 29.12	46 17.0	9 22.50	- 9.07	+0 44.95	+12.29	-2.32	- 8.50	11 47 14.93	54 23 23.5
11 47 14.3	9.9	47 32.50	47 27.6	24 28.25	- 3.70	+0 44.98	+12.01	-2.31	- 8.40	11 48 18.34	54 8 22.9
11 47 57.1	9.5	48 15.00	47 57.3	39 54.05	-13.44	+0 44.97	+11.65	-2.31	- 8.20	11 49 0.82	53 52 47.2
11 49 20.8	8.2	49 37.14	49 5.7	34 27.95	-24.35	+0 44.98	+10.55	-2.27	- 7.90	11 50 23.00	52 58 1.6
11 50 32.7	8.8	50 48.84	50 25.9	39 45.55	-16.97	+0 44.94	+12.72	-2.38	- 8.30	11 51 34.54	54 52 53.2
11 51 37.5	9.5	51 54.01	51 33.6	7 55.30	-16.74	+0 45.02	+ 8.07	-2.17	- 7.10	11 52 39.98	50 24 40.2
11 52 22.7	8.9	52 40.78	52 26.4	39 19.35	-10.93	+0 44.97	+11.73	-2.34	- 7.90	11 53 26.53	53 53 24.8
11 53 54.4	9.1	54 9.04	53 35.6	49 14.15	-24.83	+0 44.95	+12.47	-2.39	- 8.00	11 54 54.71	54 43 16.8
11 54 42.5	9.5	54 57.60	54 50.2	22 33.45	- 5.71	+0 44.98	+11.08	-2.32	- 7.60	11 55 43.37	53 10 15.6
11 55 44.1	9.2	56 0.50	55 47.3	27 17.55	-10.91	+0 45.02	+ 7.85	-2.18	- 6.80	11 56 46.44	50 5 23.8
11 57 7.4	9.1	57 22.32	57 3.6	36 37.60	-15.50	+0 45.01	+ 8.75	-2.23	- 6.90	11 58 8.19	50 56 0.0
11 57 36.8	8.7	57 52.94	57 46.8	36 18.95	- 4.84	+0 45.00	+ 9.90	-2.28	- 7.10	11 58 38.74	51 56 30.3
11 58 32.1	8.4	58 48.50	58 34.8	33 24.00	-11.10	+0 45.01	+ 8.75	-2.24	- 6.80	11 59 34.35	50 59 18.1
11 59 30.0	8.8	59 46.86	59 33.2	6 51.95	-10.76	+0 45.00	+10.34	-2.31	- 7.10	12 0 32.63	52 25 51.8
12 1 49.1	9.7	2 4.92	2 9.3	37 50.05	+ 3.57	+0 45.01	+ 8.73	-2.26	- 6.60	12 2 50.72	50 55 6.9
12 3 32.6	8.0	3 48.32	3 26.1	17 55.85	-17.90	+0 45.01	+ 8.96	-2.28	- 6.50	12 4 34.09	51 14 40.0
12 4 40.9	9.1	4 59.48	4 26.5	47 11.95	-26.30	+0 45.00	+ 9.36	-2.31	- 6.60	12 5 45.20	51 45 15.8
12 5 24.2	8.3	5 39.24	5 31.5	34 16.20	- 6.24	+0 45.01	+ 8.73	-2.28	- 6.30	12 6 25.00	50 58 31.2
12 6 20.2	8.3	6 33.10	6 50.3	37 35.45	+13.04	+0 44.96	+11.83	-2.43	- 6.90	12 7 18.64	53 55 33.8
12 7 32.4	6.9	7 45.60	7 22.5	24 48.80	-17.43	+0 44.97	+11.86	-2.54	- 6.90	12 8 31.03	54 7 50.0
12 8 32.9	9.0	8 49.24	8 20.9	2 53.90	-22.66	+0 45.02	+ 8.09	-2.27	- 6.00	12 9 34.99	50 29 36.8
12 10 20.7	6.0	10 33.62	10 1.3	39 16.00	-24.51	+0 44.96	+11.58	-2.46	- 6.60	12 11 19.10	53 53 15.8
12 11 47.9	9.0	12 2.88	11 34.2	41 1.85	-22.83	+0 44.99	+ 9.62	-2.37	- 6.10	12 12 48.48	51 51 30.1
12 13 6.9	8.8	13 19.36	12 51.8	15 58.55	-20.75	+0 44.96	+12.17	-2.51	- 6.60	12 14 4.77	54 16 37.6
12 14 24.6	9.6	14 36.38	14 1.4	36 57.25	-28.41	+0 45.00	+ 8.46	-2.34	- 5.60	12 15 22.00	50 55 28.5
12 15 40.4	8.8	15 52.38	15 20.6	29 55.00	-24.05	+0 44.96	+11.63	-2.50	- 6.30	12 16 37.78	54 2 37.6
12 17 12.4	9.1	17 26.16	16 54.9	58 32.90	-23.36	+0 44.95	+12.31	-2.54	- 6.30	12 18 11.49	54 34 1.1
12 19 28.0	9.2	19 41.08	19 19.2	9 8.30	-17.60	+0 45.00	+ 9.06	-2.39	- 6.20	12 20 26.61	51 23 28.3
12 21 58.6	9.2	22 12.82	21 48.3	32 16.45	-19.85	+0 45.00	+ 8.73	-2.38	- 5.90	12 22 58.35	51 0 17.9
ZONE 300, MAY 19, 1874.											
11 52 29.3	8.4	52 43.66	52 13.8	4 19.35	-23.45	+0 47.78	+10.23	-2.17	- 8.30	11 53 32.39	52 28 2.7
11 54 29.8	9.1	54 42.60	54 23.7	56 18.50	-14.10	+0 47.74	+12.74	-2.10	- 7.60	11 55 31.35	54 36 16.2
11 55 44.1	9.2	55 57.76	55 37.7	27 2.45	-16.60	+0 47.81	+ 7.96	-2.09	- 7.50	11 56 46.58	50 5 25.0
11 57 7.0	9.6	57 20.40	56 51.3	46 39.25	-23.20	+0 47.78	+ 9.57	-2.27	- 7.90	11 58 9.00	51 45 42.8
11 58 12.0	7.9	58 23.80	57 53.5	54 44.25	-23.68	+0 47.78	+10.34	-2.21	- 8.00	11 59 12.45	52 37 38.0
11 58 12.0	8.6	58 24.66	57 54.5	54 44.25	-23.61	+0 47.78	+10.34	-2.21	- 8.00	11 59 13.31	52 37 38.1
11 59 30.0	8.9	59 43.96	59 6.4	6 23.85	-29.52	+0 47.78	+10.14	-2.22	- 7.90	12 0 32.60	52 25 52.5
12 1 0.3	9.0	1 13.20	0 41.1	34 16.95	-25.46	+0 47.78	+ 9.65	-2.21	- 7.70	12 2 1.83	51 58 3.2
12 2 7.2	9.6	2 20.18	1 59.5	49 3.20	-16.51	+0 47.78	+ 8.62	-2.20	- 7.50	12 3 8.81	51 43 25.0
12 5 9.4	8.8	5 21.18	4 46.8	2 53.90	-26.35	+0 47.77	+11.25	-2.31	- 7.80	12 6 9.66	53 29 26.8
12 6 2.2	9.0	6 14.24	5 57.4	32 7.00	-13.32	+0 47.78	+ 9.98	-2.25	- 7.30	12 7 2.79	52 0 26.0
12 7 19.0	8.3	7 30.74	6 54.0	51 42.30	-28.66	+0 47.77	+10.40	-2.29	- 7.40	12 8 19.23	52 40 35.7
12 8 16.3	8.2	8 26.36	8 4.5	7 44.95	-16.81	+0 47.77	+11.35	-2.32	- 7.50	12 9 14.81	53 24 45.7
12 10 20.7	6.0	10 30.76	10 12.8	39 17.59	-13.66	+0 47.75	+11.84	-2.37	- 7.50	12 11 19.12	53 53 16.7
12 10 40.7	9.3	10 51.36	11 14.3	39 17.60	+17.38	+0 47.75	+11.78	-2.37	- 7.50	12 11 39.72	53 53 47.7
12 12 34.2	9.4	12 45.46	12 18.7	22 5.25	-21.16	+0 47.79	+10.10	-2.30	- 7.00	12 13 33.92	52 10 20.3
12 13 13.1	9.3	13 24.54	13 48.8	34 34.40	+18.41	+0 47.75	+11.69	-2.39	- 7.10	12 14 12.86	53 58 32.2
12 15 9.6	9.2	15 21.58	14 58.6	38 30.60	-18.68	+0 47.80	+ 8.67	-2.26	- 6.40	12 16 10.08	50 53 56.7

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	" "	" "	m s	" "	s "	" "	h m s	° ' "
12 16 16.7	8.8	16 28.50	16 3.4	16 10.55	-20.66	+0 47.81	+ 8.05	-2.24	- 6.20	12 17 17.02	50 16 14.3
12 17 15.0	9.2	17 25.72	17 7.5	17 31.25	-14.81	+0 47.80	+ 8.68	-2.26	- 6.30	12 18 14.20	50 50 0.0
12 18 45.9	9.4	18 57.38	18 22.6	18 42.90	-28.73	+0 47.82	+ 7.60	-2.24	- 6.00	12 19 45.89	50 7 33.7
12 19 52.8	9.1	20 2.60	19 43.6	19 11.05	-15.42	+0 47.80	+ 8.84	-2.28	- 6.10	12 20 51.04	50 56 20.0
12 21 42.0	7.4	21 49.68	21 29.8	21 53.30	-16.36	+0 47.81	+ 8.06	-2.27	- 5.90	12 22 38.13	50 19 36.2
12 23 13.2	7.0	23 19.54	22 48.7	23 48.95	-24.30	+0 47.79	+ 9.97	-2.36	- 6.20	12 24 7.86	52 13 34.2
12 24 40.7	9.7	24 50.70	24 28.7	24 29.30	-18.11	+0 47.82	+ 8.08	-2.29	- 5.60	12 25 39.12	50 15 58.6
12 26 38.3	8.8	26 47.84	26 52.7	26 57.40	+ 3.89	+0 47.79	+ 9.97	-2.37	- 6.00	12 27 36.13	51 55 54.2
12 28 5.7	7.5	28 12.46	27 55.3	28 34.95	-13.62	+0 47.79	+ 9.93	-2.39	- 5.90	12 29 0.72	52 2 59.2
12 29 28.0	8.5	29 35.98	29 16.3	29 15.95	-15.55	+0 47.79	+10.24	-2.40	- 5.70	12 30 24.21	52 12 16.8
12 31 27.1	9.0	31 36.94	30 50.9	31 27.20	-36.46	+0 47.79	+ 9.48	-2.40	- 5.60	12 32 25.16	51 59 44.0
12 33 10.7	9.0	33 18.98	32 50.1	33 56.45	-22.77	+0 47.79	+10.17	-2.43	- 5.50	12 34 7.16	52 16 29.3
12 34 35.5	8.5	34 46.76	34 59.7	35 6.30	+10.47	+0 47.81	+ 8.67	-2.37	- 5.10	12 35 35.02	50 55 51.6
12 36 16.0	8.8	36 23.70	35 54.4	37 4.25	-24.28	+0 47.82	+ 7.71	-2.39	- 5.00	12 37 11.95	49 55 18.1
12 36 56.7	9.3	37 3.80	37 13.0	37 5.05	+ 7.39	+0 47.81	+ 8.38	-2.36	- 4.80	12 37 52.06	50 22 49.8
12 38 24.4	9.0	38 32.26	38 8.5	38 17.15	-18.42	+0 47.77	+10.91	-2.50	- 5.40	12 39 20.30	53 3 13.8
12 39 17.9	9.4	39 25.78	39 6.7	39 13.00	-15.64	+0 47.81	+ 8.34	-2.38	- 4.70	12 40 14.00	50 30 18.9
12 39 17.9	9.2	39 26.00	39 12.3	39 13.00	-11.22	+0 47.81	+ 8.39	-2.38	- 4.70	12 40 14.22	50 30 23.4
12 40 39.3	9.0	40 46.10	40 26.3	40 4.50	-16.11	+0 47.80	+ 8.65	-2.40	- 4.70	12 41 34.28	50 49 27.3
12 41 32.6	9.4	41 40.88	41 24.0	41 8.30	-13.81	+0 47.81	+ 8.54	-2.39	- 4.50	12 42 29.07	50 36 25.9
12 42 34.3	9.4	42 42.58	42 27.8	42 18.70	-12.24	+0 47.82	+ 7.97	-2.37	- 4.30	12 43 30.80	50 2 16.7
12 44 41.4	7.8	44 47.60	44 16.6	44 22.25	-25.68	+0 47.82	+ 7.73	-2.38	- 4.20	12 45 35.80	49 56 59.6
12 45 52.5	9.1	45 59.06	45 26.5	45 19.85	-26.40	+0 47.82	+ 7.72	-2.39	- 4.10	12 46 47.24	50 2 1.4
12 47 7.9	9.0	47 13.86	46 47.4	47 52.90	-21.94	+0 47.82	+ 7.73	-2.39	- 4.00	12 48 2.03	49 59 32.9
ZONE 301, MAY 26, 1874.											
11 58 12.0	8.0	58 20.44	57 43.7	54 40.85	-28.69	+0 50.98	+10.22	-2.07	- 8.90	11 59 12.43	52 37 37.7
11 58 12.0	8.8	58 21.30	57 44.7	54 40.85	-28.61	+0 50.98	+10.22	-2.07	- 8.90	11 59 13.29	52 37 37.8
12 6 2.2	9.0	6 10.94	5 41.7	31 58.60	-23.15	+0 50.98	+ 9.77	-2.10	- 8.30	12 7 2.84	52 0 25.7
12 7 19.0	8.5	7 27.40	6 57.6	51 49.40	-23.27	+0 50.98	+10.45	-2.15	- 8.40	12 8 19.24	52 40 35.3
12 8 16.3	7.8	8 22.96	8 3.7	7 49.15	-14.82	+0 50.95	+11.33	-2.18	- 8.50	12 9 14.73	53 24 44.8
12 10 20.7	6.5	10 27.48	10 8.3	39 19.85	-14.57	+0 50.95	+11.88	-2.22	- 8.50	12 11 19.19	53 53 14.9
12 15 9.6	9.3	15 18.26	14 52.6	38 29.05	-20.87	+0 51.00	+ 8.60	-2.12	- 7.50	12 16 10.11	50 53 57.2
12 16 16.7	9.0	16 25.02	16 0.5	16 11.05	-20.16	+0 51.00	+ 8.01	-2.10	- 7.30	12 17 16.87	50 16 15.5
12 17 15.0	9.4	17 22.36	17 8.5	42 35.90	-11.31	+0 51.00	+ 8.67	-2.13	- 7.30	12 18 14.17	50 50 0.2
12 18 45.9	9.5	18 53.98	18 34.4	24 58.25	-16.18	+0 51.01	+ 7.82	-2.10	- 7.00	12 19 45.82	50 7 32.4
12 19 52.8	9.0	19 59.26	19 34.6	36 10.05	-20.04	+0 51.00	+ 8.70	-2.16	- 7.20	12 20 51.02	50 56 17.4
12 21 42.0	7.0	21 46.38	21 20.7	12 50.30	-21.13	+0 51.00	+ 8.00	-2.14	- 6.90	12 22 38.15	50 19 35.7
12 23 13.2	6.8	23 16.20	22 40.8	18 47.10	-27.92	+0 50.98	+ 9.87	-2.23	- 7.30	12 24 7.84	52 13 33.6
12 24 40.7	9.8	24 47.60	24 30.1	16 35.60	-14.40	+0 51.00	+ 8.07	-2.16	- 6.80	12 25 39.33	50 15 57.3
12 26 38.3	8.9	26 44.58	26 26.6	36 40.65	-14.29	+0 50.98	+ 8.83	-2.24	- 7.00	12 27 36.19	51 55 53.0
12 28 5.7	7.8	28 9.10	27 50.5	29 35.10	-14.73	+0 50.98	+ 9.90	-2.25	- 7.00	12 29 0.69	52 2 59.2
12 29 28.0	8.4	29 32.60	29 3.3	20 10.95	-23.12	+0 50.98	+10.02	-2.27	- 6.90	12 30 24.15	52 12 15.2
12 31 27.1	9.0	31 33.52	31 11.9	32 48.75	-17.12	+0 50.98	+ 9.85	-2.27	- 6.70	12 32 25.06	51 59 43.4
12 33 10.7	9.0	33 15.66	32 53.0	16 4.50	-17.88	+0 50.98	+10.20	-2.29	- 6.70	12 34 7.17	52 16 27.3
12 34 35.5	8.5	34 43.36	34 15.8	36 34.50	-22.40	+0 51.00	+ 8.65	-2.25	- 6.30	12 35 34.93	50 55 51.6
12 36 16.0	8.9	36 20.46	35 58.0	37 12.15	-18.65	+0 51.01	+ 7.75	-2.26	- 6.10	12 37 12.03	49 55 17.1
12 36 56.7	9.1	37 0.44	36 53.4	9 51.60	- 5.75	+0 51.00	+ 8.19	-2.24	- 6.00	12 37 52.01	50 22 51.1
12 38 24.4	8.8	38 28.68	37 58.7	29 13.85	-23.22	+0 50.96	+10.79	-2.37	- 6.50	12 39 20.04	53 3 13.5
12 39 17.9	9.1	39 22.56	39 1.0	2 14.45	-17.69	+0 51.00	+ 8.27	-2.26	- 5.90	12 40 14.09	50 30 16.5
12 39 17.9	9.1	39 22.56	39 8.2	2 14.45	-11.79	+0 51.00	+ 8.35	-2.26	- 5.90	12 40 14.09	50 30 22.5
12 40 39.3	9.2	40 42.62	40 18.3	43 1.20	-19.77	+0 51.00	+ 8.57	-2.28	- 5.80	12 41 34.12	50 49 28.1
12 41 32.6	9.2	41 37.54	41 25.6	56 14.10	- 9.72	+0 51.00	+ 8.50	-2.28	- 5.70	12 42 29.03	50 36 25.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
12 42 34.3	9.1	42 39.10	42 29.7	30 27.10	- 7.77	+0 51.01	+ 7.92	-2.25	- 5.50	12 43 30.63	50 2 13.9
12 44 41.4	7.9	44 44.28	44 14.7	35 24.95	-24.52	+0 51.01	+ 7.66	-2.27	- 5.40	12 45 35.78	49 56 59.1
12 45 52.5	9.3	45 55.66	45 34.6	30 32.10	-17.08	+0 51.01	+ 7.81	-2.28	- 5.30	12 46 47.14	50 1 59.7
12 47 7.9	9.1	47 10.40	46 46.7	32 57.25	-19.62	+0 51.01	+ 7.73	-2.28	- 5.20	12 48 1.87	49 59 32.0
ZONE 302, MAY 27, 1874.											
12 31 49.8	8.7	31 54.56	31 28.6	45 49.80	-20.72	+0 51.37	+ 9.64	-2.25	- 6.80	12 32 46.51	51 46 36.5
12 32 58.5	9.6	33 3.82	32 52.6	51 27.55	- 8.94	+0 51.37	+ 9.68	-2.25	- 6.70	12 33 55.76	51 41 10.7
12 33 48.1	8.6	33 51.44	33 37.4	22 28.20	-11.06	+0 51.37	+10.17	-2.28	- 6.80	12 34 43.34	52 10 8.4
12 35 13.3	9.7	35 17.76	34 51.8	43 4.10	-20.69	+0 51.37	+ 9.68	-2.27	- 6.60	12 36 9.66	51 49 22.6
12 37 6.5	9.2	37 10.34	36 45.1	27 54.55	-19.95	+0 51.37	+ 9.95	-2.29	- 6.50	12 38 2.21	52 4 33.2
12 38 24.4	9.0	38 28.44	38 2.8	29 14.55	-19.41	+0 51.36	+10.94	-2.35	- 6.70	12 39 20.22	53 3 14.6
12 39 7.6	9.2	39 10.26	38 59.6	22 40.25	- 8.45	+0 51.37	+10.18	-2.31	- 6.40	12 40 2.09	52 9 59.4
12 40 10.1	8.0	40 13.38	40 8.9	13 32.25	- 3.54	+0 51.37	+10.36	-2.32	- 6.40	12 41 5.19	52 19 12.5
12 41 11.2	6.9	41 13.08	40 58.0	42 11.60	-12.28	+0 51.39	+ 8.75	-2.26	- 6.00	12 42 4.98	50 50 23.2
12 42 16.4	9.2	42 23.08	42 11.6	46 13.05	- 9.36	+0 51.39	+ 8.72	-2.27	- 5.80	12 43 14.96	50 46 24.9
12 43 7.6	8.9	43 10.44	42 59.3	19 35.80	- 7.96	+0 51.38	+10.15	-2.33	- 6.20	12 44 2.23	52 13 4.7
12 44 12.7	9.1	44 17.48	43 49.1	3 21.80	-22.77	+0 51.38	+ 9.28	-2.31	- 5.90	12 45 9.29	51 29 3.2
12 45 45.7	8.0	45 48.84	45 30.2	34 48.30	-15.09	+0 51.39	+ 8.83	-2.30	- 5.70	12 46 40.67	50 57 44.2
12 47 46.0	9.4	47 49.56	47 25.7	7 58.30	-19.62	+0 51.40	+ 8.19	-2.29	- 5.40	12 48 41.40	50 24 29.3
12 48 37.9	8.5	48 38.24	48 28.1	25 36.75	- 8.34	+0 51.41	+ 8.03	-2.28	- 5.30	12 49 30.10	50 7 2.1
12 49 56.0	9.2	49 57.20	49 37.3	32 56.70	-16.48	+0 51.41	+ 7.79	-2.28	- 5.20	12 50 49.05	49 59 33.9
12 50 52.7	9.2	50 54.30	50 37.1	19 1.00	-14.17	+0 51.41	+ 8.06	-2.29	- 5.20	12 51 46.13	50 13 32.2
12 52 6.3	9.2	52 9.02	51 46.6	35 46.40	-18.56	+0 51.41	+ 7.79	-2.33	- 5.30	12 53 0.81	49 56 42.1
12 53 10.8	8.3	53 10.68	52 53.0	59 30.55	-13.54	+0 51.36	+11.56	-2.46	- 5.70	12 54 2.23	53 33 6.3
12 54 18.0	8.7	54 18.36	53 57.6	14 39.80	-17.11	+0 51.41	+ 8.08	-2.31	- 5.00	12 55 10.15	50 17 50.8
12 56 12.5	9.0	56 15.18	55 49.8	37 21.45	-19.72	+0 51.39	+10.85	-2.44	- 5.50	12 57 6.77	52 55 8.8
12 56 58.4	9.0	57 0.88	56 52.8	33 40.70	- 6.57	+0 51.41	+ 8.93	-2.36	- 5.00	12 57 52.59	50 59 1.3
12 58 24.6	8.1	58 23.20	58 3.9	40 6.10	-15.34	+0 51.40	+ 9.85	-2.41	- 5.10	12 59 14.83	51 52 28.0
12 59 15.9	8.8	59 18.54	58 53.2	24 13.65	-20.88	+0 51.42	+ 7.88	-2.34	- 4.60	13 0 10.28	50 8 13.5
13 1 18.4	9.0	1 18.98	0 56.1	22 43.15	-18.89	+0 51.42	+ 7.95	-2.35	- 4.50	13 2 10.69	50 9 46.2
13 2 41.9	7.7	2 41.68	2 16.8	25 17.20	-20.56	+0 51.42	+ 7.89	-2.35	- 4.40	13 3 33.38	50 7 10.5
13 3 40.7	8.8	3 42.38	3 27.0	11 40.85	-12.66	+0 51.41	+ 8.22	-2.37	- 4.40	13 4 34.04	50 20 55.1
13 4 17.9	9.4	4 16.70	4 12.2	23 6.20	- 3.71	+0 51.43	+ 8.07	-2.37	- 4.60	13 5 8.38	50 9 38.4
13 8 3.4	9.5	8 3.60	8 1.2	56 30.70	- 1.92	+0 51.41	+ 9.65	-2.45	- 4.40	13 8 55.13	51 36 17.5
13 9 19.8	8.3	9 20.12	8 59.1	2 55.20	-16.84	+0 51.41	+ 9.39	-2.45	- 4.30	13 10 11.65	51 29 38.0
13 10 26.8	8.5	10 27.54	10 3.1	18 40.85	-19.68	+0 51.42	+ 9.07	-2.44	- 4.10	13 11 19.08	51 13 49.4
13 11 56.7	7.9	11 56.58	11 26.9	26 6.80	-24.01	+0 51.43	+ 8.87	-2.44	- 4.00	13 12 48.13	51 6 19.1
13 13 41.9	8.0	13 40.50	13 15.3	27 1.65	-20.38	+0 51.43	+ 8.92	-2.45	- 3.90	13 14 32.02	51 5 28.1
13 14 16.7	8.8	14 16.24	14 1.5	27 12.25	-11.89	+0 51.43	+ 9.03	-2.46	- 3.90	13 15 7.75	51 5 26.1
13 17 23.5	8.5	17 22.76	16 54.7	49 20.15	-22.42	+0 51.42	+ 9.53	-2.50	- 3.70	13 18 14.18	51 43 8.4
13 24 23.7	8.8	24 22.60	23 53.4	20 0.05	-23.04	+0 51.43	+10.09	-2.56	- 3.40	13 25 13.92	52 12 29.0
13 25 38.5	9.4	25 35.72	25 4.9	57 42.90	-23.55	+0 51.40	+11.44	-2.63	- 3.60	13 26 26.89	53 34 46.8
13 27 57.4	7.8	27 55.32	27 25.8	56 54.85	-22.80	+0 51.44	+ 9.43	-2.54	- 3.00	13 28 46.66	51 35 34.3
13 29 57.8	8.0	29 55.82	29 31.1	10 13.70	-18.98	+0 51.41	+11.34	-2.64	- 3.20	13 30 46.97	53 22 21.0
13 32 3.4	9.0	32 0.30	31 33.0	50 51.00	-21.79	+0 51.44	+ 9.57	-2.57	- 2.70	13 32 51.57	51 41 39.7
13 33 31.6	6.5	33 27.86	33 6.9	6 16.35	-16.48	+0 51.43	+10.41	-2.61	- 2.80	13 34 19.06	52 26 20.5
13 34 35.0	7.8	34 30.16	34 11.3	48 1.50	-14.39	+0 51.42	+11.80	-2.68	- 3.00	13 35 21.24	53 44 38.6
13 35 4.6	6.7	35 0.48	34 53.3	8 29.45	- 5.53	+0 51.43	+11.50	-2.66	- 2.80	13 35 51.59	53 24 19.5

ZONE 303, MAY 28, 1874.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R.A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
12 31 49.8	8.7	31 54.34	31 45.9	46 53.55	- 6.69	+0 51.68	+ 8.72	-2.23	- 6.90	12 32 46.62	51 46 35.4
12 32 58.5	9.3	33 3.58	32 51.6	51 28.90	- 9.58	+0 51.69	+ 9.60	-2.23	- 6.80	12 33 55.86	51 41 9.9
12 33 48.1	8.5	33 51.18	33 42.7	22 34.55	- 6.71	+0 51.69	+10.12	-2.26	- 6.90	12 34 43.42	52 10 7.6
12 35 13.3	9.6	35 17.60	34 57.0	43 7.90	-16.40	+0 51.69	+ 9.67	-2.25	- 6.70	12 36 9.84	51 49 24.3
12 37 6.5	9.3	37 10.16	36 41.6	27 52.30	-22.64	+0 51.69	+ 9.83	-2.27	- 6.60	12 38 2.37	52 4 34.0
12 38 24.4	9.0	38 28.04	38 1.3	29 15.50	-20.66	+0 51.68	+10.85	-2.33	- 6.80	12 39 20.16	53 3 13.6
12 39 7.6	9.3	39 9.84	38 59.7	22 42.35	- 7.98	+0 51.69	+10.11	-2.29	- 6.60	12 40 2.01	52 9 58.9
12 40 10.1	8.2	40 13.16	40 2.7	13 28.80	- 8.26	+0 51.69	+10.27	-2.30	- 6.50	12 41 5.31	52 19 12.4
12 41 11.2	7.0	41 12.74	41 3.2	42 17.65	- 7.72	+0 51.71	+ 8.72	-2.25	- 6.10	12 42 4.97	50 50 23.0
12 42 16.4	9.2	42 22.58	42 4.2	46 7.75	-14.98	+0 51.71	+ 8.60	-2.25	- 6.00	12 43 14.80	50 46 25.6
12 43 7.6	8.9	43 9.98	42 51.1	19 31.00	-14.91	+0 51.69	+10.08	-2.31	- 6.30	12 44 2.10	52 13 3.6
12 44 12.7	9.2	44 17.28	44 1.7	3 32.85	-12.51	+0 51.70	+ 9.35	-2.29	- 6.10	12 45 9.43	51 29 3.7
12 45 45.7	8.2	45 48.58	45 19.7	34 42.45	-23.44	+0 51.71	+ 8.64	-2.28	- 5.90	12 46 40.75	50 57 42.7
12 47 46.0	9.5	47 49.08	47 26.2	8 1.00	-18.79	+0 51.71	+ 8.14	-2.27	- 5.60	12 48 41.25	50 24 28.6
12 48 37.9	8.4	48 37.92	48 18.5	25 30.80	-16.02	+0 51.72	+ 7.90	-2.26	- 5.50	12 49 30.11	50 7 1.4
12 49 56.0	9.2	49 56.90	49 36.8	32 58.05	-16.64	+0 51.72	+ 7.73	-2.26	- 5.40	12 50 49.08	49 59 33.5
12 50 52.7	8.9	50 53.94	50 39.0	19 3.65	-12.28	+0 51.72	+ 8.02	-2.27	- 5.40	12 51 46.10	50 13 32.6
12 52 6.3	9.4	52 8.84	51 48.3	35 49.65	-16.99	+0 51.72	+ 7.76	-2.31	- 5.40	12 53 0.96	49 56 41.6
12 53 10.8	8.3	53 10.38	52 57.4	59 35.25	- 9.94	+0 51.66	+11.50	-2.44	- 6.00	12 54 2.25	53 33 6.3
12 54 18.0	8.8	54 18.12	53 55.4	14 40.45	-18.68	+0 51.72	+ 8.01	-2.30	- 5.20	12 55 10.23	50 17 49.6
12 56 12.5	9.1	56 15.00	55 45.6	37 18.75	-22.83	+0 51.68	+10.71	-2.42	- 5.60	12 57 6.90	52 55 9.5
12 56 58.4	9.0	57 0.54	56 43.6	33 34.45	-13.70	+0 51.71	+ 8.81	-2.34	- 5.10	12 57 52.57	50 59 1.6
12 58 24.6	8.0	58 22.86	57 59.6	40 3.65	-18.52	+0 51.69	+ 9.75	-2.39	- 5.30	12 59 14.80	51 52 28.3
12 59 15.9	8.9	59 18.16	58 59.9	24 21.00	-15.10	+0 51.72	+ 7.91	-2.32	- 4.80	13 0 10.22	50 8 13.1
13 1 18.4	8.8	1 18.76	0 55.8	22 44.50	-18.98	+0 51.72	+ 7.90	-2.33	- 4.70	13 2 10.79	50 9 45.8
13 2 41.9	8.0	2 41.48	2 12.0	25 14.50	-24.36	+0 51.72	+ 7.78	-2.33	- 4.60	13 3 33.50	50 7 10.5
13 3 40.7	9.2	3 42.12	3 16.2	11 31.65	-21.29	+0 51.71	+ 8.05	-2.35	- 4.60	13 4 34.10	50 20 56.7
13 8 3.4	9.6	8 3.32	7 53.4	56 25.80	- 7.92	+0 51.70	+ 9.55	-2.43	- 4.60	13 8 55.16	51 36 17.5
13 9 19.8	8.5	9 19.70	8 58.3	2 57.10	-17.16	+0 51.70	+ 9.32	-2.43	- 4.50	13 10 11.54	51 29 36.9
13 10 26.8	8.6	10 27.28	10 6.1	18 44.75	-17.10	+0 51.70	+10.02	-2.43	- 4.30	13 11 19.11	51 13 50.2
13 11 56.7	7.5	11 56.20	11 29.7	26 10.40	-21.42	+0 51.71	+ 8.85	-2.43	- 4.20	13 12 48.04	51 6 19.2
13 13 41.9	8.2	13 40.30	13 11.2	27 0.40	-23.54	+0 51.71	+ 8.80	-2.44	- 4.10	13 14 32.11	51 5 27.2
13 14 16.7	8.7	14 15.88	14 8.8	27 20.95	- 5.74	+0 51.71	+ 9.00	-2.44	- 4.00	13 15 7.69	51 5 24.8
13 17 23.5	8.7	17 22.48	16 57.3	49 23.90	-20.10	+0 51.69	+ 9.49	-2.48	- 3.90	13 18 14.19	51 43 8.1
13 20 11.3	9.4	20 9.52	19 49.9	0 9.60	-15.70	+0 51.69	+ 9.41	-2.49	- 3.70	13 21 1.21	51 32 27.0
13 24 23.7	9.1	24 22.22	24 0.5	20 6.10	-17.12	+0 51.69	+10.11	-2.54	- 3.50	13 25 13.82	52 12 30.2
13 25 38.5	9.2	25 35.36	25 11.2	57 49.50	-18.50	+0 51.66	+11.46	-2.61	- 3.80	13 26 26.81	53 34 46.5
13 26 47.3	8.0	26 42.62	26 23.2	51 33.70	-14.83	+0 51.68	+10.60	-2.57	- 3.50	13 27 34.15	52 41 5.4
13 27 57.4	8.0	27 54.98	27 45.4	57 11.85	- 7.68	+0 51.70	+ 9.54	-2.53	- 3.20	13 28 46.59	51 35 33.7
13 29 57.8	8.0	29 55.44	29 34.2	10 17.95	-16.29	+0 51.66	+11.30	-2.63	- 3.40	13 30 46.85	53 22 20.6
13 32 3.4	9.1	32 0.08	31 27.9	50 48.35	-25.71	+0 51.69	+ 9.41	-2.55	- 2.90	13 32 51.62	51 41 39.5
13 33 31.6	6.3	33 27.58	32 51.6	6 5.15	-28.25	+0 51.68	+10.15	-2.59	- 2.90	13 34 19.05	52 26 20.9
13 34 35.0	7.0	34 29.78	34 6.2	47 57.95	-17.97	+0 51.66	+11.64	-2.66	- 3.10	13 35 21.12	53 44 39.7
13 35 4.6	6.7	35 0.12	35 24.7	8 55.05	+18.89	+0 51.66	+11.28	-2.65	- 3.00	13 35 51.47	53 24 19.2
ZONE 304, JUNE 2, 1874.											
13 27 34.5	8.7	27 29.02	27 6.1	46 24.75	-18.08	+0 53.68	+ 9.85	-2.46	- 4.20	13 28 22.67	51 46 8.4
13 28 29.1	8.6	28 23.66	28 6.6	56 24.35	-13.25	+0 53.67	+10.78	-2.50	- 4.30	13 29 17.24	52 36 14.5
13 30 14.4	8.9	30 9.58	29 40.7	25 24.10	-23.65	+0 53.70	+ 7.94	-2.40	- 3.70	13 31 3.33	50 7 2.2
13 32 13.9	9.6	32 9.00	31 44.7	52 29.90	-19.65	+0 53.70	+ 8.64	-2.43	- 3.60	13 33 2.70	50 40 1.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s "	"	h m s	° ' "
13 34 27.9	6.0	34 32.01	34 0.4	23 21.75	-25.29	+0 53.69	+ 9.05	-2.46	- 3.60	13 35 25.64	51 9 4.2
13 35 37.1	9.0	35 30.72	35 17.4	5 56.55	-10.35	+0 53.67	+10.65	-2.52	- 3.80	13 36 24.23	52 26 45.8
13 37 12.3	7.0	37 6.14	36 35.3	52 57.55	-24.92	+0 53.70	+ 8.55	-2.45	- 3.40	13 37 59.79	50 39 28.6
13 38 7.7	9.0	38 1.56	37 36.6	26 40.05	-19.60	+0 53.68	+10.17	-2.51	- 3.60	13 38 55.08	52 5 52.9
13 38 55.7	9.2	38 49.76	38 33.1	7 43.10	-13.00	+0 53.67	+10.61	-2.53	- 3.70	13 39 43.24	52 24 56.8
13 40 50.4	8.7	40 43.80	40 16.2	55 13.80	-21.38	+0 53.67	+10.67	-2.55	- 3.50	13 41 37.24	52 37 18.1
13 41 29.9	9.3	41 23.78	41 13.3	8 19.30	- 8.36	+0 53.69	+ 9.59	-2.50	- 3.20	13 42 17.32	51 24 24.8
13 43 36.1	8.8	43 27.88	43 2.9	26 14.30	-19.60	+0 53.68	+10.18	-2.54	- 3.20	13 44 21.34	52 6 19.3
13 46 17.0	8.6	46 9.12	45 46.3	58 8.10	-18.47	+0 53.70	+ 8.58	-2.49	- 2.80	13 47 2.67	50 34 25.5
13 48 3.6	6.9	47 55.86	47 23.7	48 44.75	-24.89	+0 53.67	+10.76	-2.59	- 3.00	13 48 49.21	52 43 44.5
13 49 6.8	9.2	49 0.10	48 36.8	37 13.40	-18.34	+0 53.68	+10.04	-2.56	- 2.80	13 49 53.50	51 55 21.9
13 50 2.9	8.9	49 54.98	49 36.8	42 43.15	-14.69	+0 53.68	+ 8.97	-2.56	- 2.70	13 50 48.38	51 49 54.9
ZONE 305, JUNE 9, 1874.											
13 28 29.1	9.0	28 21.24	28 1.1	56 25.35	-15.58	+0 55.99	+10.35	-2.36	- 5.40	13 29 17.28	52 36 14.0
13 30 14.4	9.0	30 7.20	29 44.5	25 32.80	-18.57	+0 56.04	+ 7.70	-2.28	- 4.80	13 31 3.41	50 7 1.5
13 32 13.9	9.8	32 6.68	31 41.3	52 31.30	-20.54	+0 56.03	+ 8.38	-2.31	- 4.80	13 33 2.83	50 40 1.8
13 34 27.9	6.5	34 29.62	34 5.2	23 30.85	-19.53	+0 56.02	+ 8.94	-2.34	- 4.80	13 35 25.70	51 9 3.9
13 35 37.1	9.2	35 28.44	35 16.5	5 59.95	- 9.25	+0 55.99	+10.25	-2.41	- 5.00	13 36 24.38	52 26 46.2
13 37 12.3	7.9	37 3.74	36 34.0	53 1.40	-24.03	+0 56.03	+ 8.34	-2.33	- 4.50	13 37 59.84	50 39 28.6
13 38 7.7	8.9	37 59.04	37 37.5	26 45.60	-16.86	+0 56.00	+ 9.86	-2.39	- 4.80	13 38 55.00	52 5 52.9
13 38 55.7	9.2	38 47.20	38 33.3	7 48.65	-10.82	+0 55.99	+10.31	-2.41	- 4.80	13 39 43.12	52 24 56.3
13 40 50.4	8.5	40 41.44	40 14.6	55 17.30	-20.76	+0 55.99	+10.23	-2.43	- 4.70	13 41 37.32	52 37 17.8
13 41 29.9	9.0	41 21.26	41 58.0	9 1.35	+29.22	+0 56.01	+ 9.02	-2.37	- 4.40	13 42 17.25	51 24 22.9
13 43 36.1	9.0	43 25.44	42 53.1	26 11.20	-25.31	+0 56.00	+ 9.62	-2.42	- 4.50	13 44 21.34	52 6 19.1
13 46 17.0	8.7	46 6.80	45 41.9	58 8.70	-20.13	+0 56.03	+ 8.32	-2.37	- 4.00	13 47 2.80	50 34 26.1
13 48 3.6	7.8	47 53.48	47 35.8	48 58.20	-13.68	+0 55.99	+10.67	-2.47	- 4.30	13 48 49.27	52 43 45.1
13 49 6.8	9.3	48 57.88	48 37.9	37 19.90	-15.74	+0 56.00	+ 9.73	-2.44	- 4.10	13 49 53.72	51 55 20.7
13 50 2.9	8.7	49 52.64	49 36.8	42 47.20	-12.46	+0 56.00	+ 9.70	-2.44	- 4.00	13 50 48.48	51 49 56.8
13 52 11.6	8.5	52 1.56	51 28.8	56 17.80	-25.42	+0 55.99	+10.18	-2.48	- 4.00	13 52 57.31	52 36 13.8
13 52 59.4	9.2	52 49.08	52 37.5	34 18.50	- 9.12	+0 56.00	+10.00	-2.47	- 3.90	13 53 44.86	51 58 29.3
13 54 18.8	8.0	54 8.34	53 36.6	46 40.25	-24.48	+0 55.98	+10.38	-2.50	- 4.00	13 55 4.05	52 45 52.6
13 58 57.2	8.5	58 45.50	58 17.7	29 18.40	-21.81	+0 56.00	+ 9.89	-2.49	- 3.50	13 59 41.23	52 3 17.3
ZONE 306, JUNE 10, 1874.											
13 27 34.5	9.2	28 26.76	28 13.5	46 33.80	-10.50	-0 4.05	+ 9.82	-2.31	- 5.50	13 28 22.83	51 46 7.2
13 28 29.1	9.0	29 21.28	29 58.6	57 7.35	+28.91	-0 4.06	+10.57	-2.34	- 5.60	13 29 17.29	52 36 13.7
13 30 14.4	8.9	31 7.10	30 40.9	25 28.60	-21.44	-0 4.01	+ 7.85	-2.26	- 5.00	13 31 3.28	50 7 0.1
13 30 44.9	...	31 38.42	.....	.....	.....	-0 4.02	.....	-2.27	.....	13 31 34.56	.....
13 34 27.9	6.8	35 29.58	35 1.1	23 25.90	-22.81	-0 4.03	+ 9.13	-2.32	- 5.00	13 35 25.63	51 9 2.8
13 35 37.1	9.0	36 28.38	36 4.7	5 49.80	-18.44	-0 4.05	+10.37	-2.39	- 5.20	13 36 24.30	52 26 44.4
13 37 12.3	7.8	38 3.68	37 36.0	53 1.70	-22.41	-0 4.02	+ 8.58	-2.31	- 4.70	13 37 59.75	50 39 27.3
13 38 7.7	9.0	38 59.04	38 44.0	26 49.55	-11.76	-0 4.04	+10.18	-2.37	- 4.90	13 38 54.98	52 5 51.5
13 38 55.7	9.3	39 47.20	39 39.2	7 51.90	- 6.23	-0 4.04	+10.61	-2.39	- 5.00	13 39 43.11	52 24 55.0
13 40 50.4	8.7	41 41.42	41 28.0	55 26.40	-10.38	-0 4.04	+10.63	-2.41	- 4.90	13 41 37.29	52 37 16.6
13 41 29.9	8.9	42 20.97	42 35.6	8 40.55	+11.27	-0 4.03	+ 9.58	-2.36	- 4.60	13 42 16.93	51 24 23.4
13 43 36.1	8.9	44 25.56	43 58.5	26 14.10	-21.24	-0 4.04	+10.01	-2.40	- 4.60	13 44 21.44	52 6 17.8
13 46 17.0	8.7	47 6.86	46 49.5	58 14.05	-14.10	-0 4.01	+ 8.64	-2.36	- 4.20	13 47 2.83	50 34 24.1
13 48 3.6	8.0	48 53.46	48 25.9	48 50.45	-21.33	-0 4.04	+10.82	-2.45	- 4.50	13 48 49.24	52 43 42.5
13 49 6.8	9.1	49 57.80	49 33.4	37 13.95	-19.20	-0 4.04	+ 9.94	-2.42	- 4.30	13 49 53.62	51 55 20.5

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	[′] [″]	[″]	^m ^s	[″]	^s	[″]	^h ^m ^s	[°] [′] [″]
13 50 2.9	8.8	50 52.70	50 31.5	42 42.95	-16.72	-0 4.04	+ 9.91	-2.42	- 4.20	13 50 48.52	51 49 54.0
13 52 11.6	8.0	53 1.44	52 37.3	56 23.30	-18.68	-0 4.03	+10.59	-2.46	- 4.20	13 52 57.19	52 36 12.5
13 52 59.4	9.0	53 48.92	54 1.6	34 35.20	+ 9.98	-0 4.03	+10.27	-2.45	- 4.00	13 53 44.69	51 58 29.2
13 54 18.8	7.7	55 8.36	55 0.4	46 57.95	- 6.18	-0 4.05	+10.92	-2.48	- 4.10	13 55 4.06	52 45 50.9
13 58 57.2	8.5	59 45.42	59 14.5	29 12.90	-24.25	-0 4.03	+10.12	-2.47	- 3.70	13 59 41.14	52 3 17.6
ZONE 307, JUNE 18, 1874.											
14 5 32.4	8.0	6 21.08	6 6.9	35 4.90	-10.66	-0 4.73	+11.84	-2.39	- 4.90	14 6 16.07	53 57 39.8
14 8 26.5	8.6	9 15.18	8 44.6	39 36.65	-24.11	-0 4.68	+ 9.98	-2.36	- 4.60	14 9 10.30	51 52 53.2
14 10 15.5	9.0	11 2.48	10 35.6	17 30.45	-20.54	-0 4.71	+11.22	-2.42	- 4.70	14 10 57.45	53 15 4.2
14 10 58.3	9.0	11 45.06	11 30.8	10 42.75	-10.89	-0 4.72	+11.29	-2.43	- 4.50	14 11 40.01	53 22 1.8
14 11 53.2	8.5	12 40.40	12 23.4	58 18.05	-13.48	-0 4.67	+ 9.69	-2.37	- 4.30	14 12 35.51	51 34 22.6
14 13 27.2	6.6	14 13.46	13 47.3	55 58.65	-20.30	-0 4.69	+10.41	-2.41	- 4.40	14 14 8.46	52 36 35.9
14 15 20.8	9.2	16 9.04	15 36.8	17 32.00	-25.15	-0 4.69	+10.01	-2.41	- 4.20	14 16 4.05	52 14 57.6
14 15 20.8	9.0	16 9.90	16 27.8	17 32.00	+13.98	-0 4.69	+10.19	-2.41	- 4.20	14 16 4.91	52 15 36.9
14 17 6.6	7.8	17 51.84	17 30.0	27 11.40	-16.32	-0 4.74	+12.12	-2.45	- 4.40	14 17 46.68	54 5 29.0
14 18 1.4	8.3	18 47.00	18 43.0	10 7.40	- 2.97	-0 4.75	+12.36	-2.46	- 4.50	14 18.41.80	54 22 46.5
14 18 54.4	7.0	19 42.10	19 25.1	26 44.85	-13.92	-0 4.66	+ 7.99	-2.35	- 3.60	14 19 37.25	50 5 54.7
14 20 8.5	9.0	20 55.74	20 33.1	52 21.45	-17.89	-0 4.69	+ 9.65	-2.41	- 3.90	14 20 50.74	51 40 15.5
14 22 28.1	9.5	23 14.26	22 46.8	3 28.55	-20.38	-0 4.75	+12.64	-2.53	- 4.20	14 23 8.96	54 29 8.8
14 26 52.2	8.2	27 37.66	27 9.2	58 9.40	-22.60	-0 4.68	+ 9.56	-2.44	- 3.50	14 27 32.60	51 34 23.5
14 29 35.5	6.0	30 22.32	29 59.6	37 44.75	-18.66	-0 4.66	+ 7.94	-2.39	- 3.00	14 30 17.37	49 54 51.2
14 42 53.6	8.0	43 39.18	43 27.6	27 47.30	- 9.50	-0 4.67	+ 8.12	-2.45	- 2.30	14 43 34.09	50 4 59.4
14 49 22.1	8.5	50 4.04	49 47.8	24 35.50	-12.11	-0 4.75	+12.48	-2.63	- 2.60	14 49 58.48	54 8 13.0
14 51 4.0	7.8	51 43.66	51 10.0	22 24.10	-25.17	-0 4.75	+12.07	-2.64	- 2.55	14 51 38.09	54 10 11.1
14 53 15.8	8.2	53 58.99	53 29.1	6 28.05	-23.26	-0 4.71	+ 9.95	-2.57	- 2.10	14 53 53.59	52 26 7.5
14 54 45.6	9.5	55 30.02	55 9.2	19 19.05	-16.98	-0 4.67	+ 8.38	-2.49	- 1.70	14 55 24.82	50 13 21.7
14 56 24.3	8.7	57 6.78	56 36.6	38 51.30	-23.25	-0 4.72	+10.96	-2.60	- 2.10	14 57 1.30	52 53 45.5
14 58 1.2	7.3	58 43.60	58 11.2	25 51.45	-25.40	-0 4.71	+ 9.84	-2.57	- 1.80	14 58 38.18	52 6 42.5
ZONE 308, JUNE 24, 1874.											
14 17 6.6	8.0	17 54.50	17 27.4	27 9.75	-20.28	-0 7.43	+12.01	-2.36	- 5.40	14 17 46.74	54 5 27.7
14 18 1.4	8.5	18 49.62	18 31.6	9 59.20	-13.38	-0 7.44	+12.81	-2.38	- 5.40	14 18 41.81	54 22 46.0
14 18 54.4	7.3	19 44.70	19 35.9	26 53.65	- 7.22	-0 7.36	+ 8.13	-2.24	- 4.60	14 19 37.26	50 5 53.9
14 20 8.5	9.0	20 58.52	21 8.8	52 50.50	+ 8.15	-0 7.38	+ 9.84	-2.30	- 4.80	14 20 50.94	51 40 14.0
14 26 52.2	7.7	27 40.20	27 7.2	58 8.05	-26.15	-0 7.38	+ 9.59	-2.32	- 4.50	14 27 32.56	51 34 22.6
14 27 33.8	9.0	28 21.06	28 15.2	10 2.05	- 4.71	-0 7.37	+ 9.30	-2.32	- 4.40	14 28 13.43	51 22 49.8
14 29 35.5	6.3	30 24.98	30 0.1	37 46.10	-20.47	-0 7.35	+ 8.01	-2.31	- 4.10	14 30 17.42	49 54 49.2
14 31 18.2	8.8	32 5.14	32 2.4	47 20.05	- 2.04	-0 7.43	+11.98	-2.42	- 4.60	14 31 57.24	53 45 37.2
14 33 12.4	7.6	33 58.92	33 28.8	25 25.70	-23.58	-0 7.38	+ 9.86	-2.37	- 4.20	14 33 51.17	52 7 8.4
14 34 41.7	8.2	35 29.80	35 1.7	59 56.25	-22.30	-0 7.38	+ 9.82	-2.36	- 4.10	14 35 22.08	51 32 39.3
14 35 37.8	9.0	36 25.48	38 16.0	2 5.50	- 7.54	-0 7.38	+ 9.57	-2.36	- 4.00	14 36 17.75	51 30 44.7
14 36 48.3	7.5	37 34.88	37 21.0	36 49.25	-10.94	-0 7.38	+10.02	-2.37	- 4.00	14 37 27.12	51 55 58.0
14 38 39.2	7.8	39 26.28	39 0.2	5 59.80	-20.78	-0 7.39	+10.33	-2.40	- 4.00	14 39 18.45	52 26 38.1
14 39 44.0	8.0	40 31.50	40 13.3	20 9.50	-14.86	-0 7.35	+ 8.02	-2.34	- 3.60	14 40 23.85	50 12 32.4
14 41 14.0	8.4	42 1.48	41 33.8	23 31.10	-21.69	-0 7.39	+10.28	-2.41	- 3.70	14 41 53.64	52 9 6.2
14 41 42.7	9.2	42 30.78	42 55.1	27 58.00	+19.06	-0 7.38	+10.23	-2.41	- 3.80	14 42 22.95	52 5 20.0
14 42 53.6	8.5	43 41.82	43 34.2	27 52.50	- 6.22	-0 7.35	+ 8.30	-2.35	- 3.40	14 43 34.15	50 4 58.7
14 44 10.7	8.5	44 55.62	44 44.3	58 7.05	- 8.56	-0 7.42	+11.87	-2.47	- 3.90	14 44 47.61	53 34 45.0
14 45 39.0	7.8	46 24.58	45 55.5	36 58.50	-22.39	-0 7.40	+10.90	-2.45	- 3.70	14 46 16.63	52 55 39.0

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.			Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.		R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"		s	"	h m s	° ' "
14 46 45.6	9.2	47 31.80	47 16.5	47 33.10	-11.54	-0 7.42	+11.95	-2.48	-3.80		14 47 23.76	53 45 16.3
14 49 22.1	8.4	50 6.62	49 42.9	24 33.85	-17.72	-0 7.44	+12.49	-2.51	-3.70		14 49 58.49	54 8 10.1
14 51 4.0	8.0	51 46.28	51 19.4	22 31.85	-20.09	-0 7.41	+12.27	-2.52	-3.70		14 51 38.17	54 10 9.6
14 53 15.8	9.0	54 1.70	53 33.2	6 32.40	-22.17	-0 7.39	+10.34	-2.46	-3.30		14 53 53.73	52 26 5.6
14 54 45.6	9.0	55 32.90	55 11.3	19 22.10	-17.64	-0 7.35	+8.47	-2.39	-2.80		14 55 25.12	50 13 19.2
14 56 24.3	8.8	57 9.40	56 45.0	38 58.10	-19.22	-0 7.40	+11.16	-2.49	-3.20		14 57 1.35	52 53 44.0
14 58 1.2	6.9	58 46.24	58 14.5	25 54.00	-24.85	-0 7.38	+9.91	-2.47	-3.00		14 58 38.25	52 6 41.5
14 59 33.5	8.8	0 18.82	59 46.0	7 27.30	-26.67	-0 7.36	+8.31	-2.42	-2.60		15 0 10.97	50 25 5.3
15 0 45.6	8.9	1 31.20	1 8.9	23 18.90	-18.23	-0 7.36	+8.30	-2.42	-2.60		15 1 23.35	50 9 22.2
15 1 41.7	8.8	2 25.00	2 9.7	22 0.20	-11.43	-0 7.44	+12.37	-2.56	-3.10		15 2 16.78	54 10 51.3
15 3 16.9	7.7	4 0.60	3 29.0	4 16.45	-24.00	-0 7.42	+11.71	-2.54	-2.90		15 3 52.42	53 28 22.1
15 4 19.4	8.1	5 2.70	4 36.7	48 25.25	-19.62	-0 7.43	+11.92	-2.55	-2.90		15 4 54.48	53 44 18.0
15 5 32.1	9.8	6 15.13	5 41.0	39 23.35	-26.25	-0 7.40	+11.05	-2.53	-2.80		15 6 6.99	52 53 12.5
15 24 53.5	9.2	25 37.46	25 21.1	13 21.60	-13.08	-0 7.38	+10.57	-2.53	-1.50		15 25 29.32	51 19 29.6
15 26 52.7	9.6	27 34.72	27 15.0	7 10.90	-14.98	-0 7.43	+11.58	-2.62	-1.70		15 27 26.32	53 25 39.3
15 28 1.7	9.2	28 40.68	28 17.1	38 7.90	-17.39	-0 7.46	+13.23	-2.68	-2.00		15 28 32.11	54 53 41.3
ZONE 309, JUNE 28, 1874.												
14 29 35.5	6.0	30 26.86	30 14.5	37 54.50	-10.19	-0 9.29	+7.87	-2.24	-4.70		14 30 17.43	49 54 51.1
14 33 12.4	7.2	34 0.84	32 26.5	25 21.50	-26.87	-0 9.33	+9.41	-2.28	-4.80		14 33 51.23	52 7 9.1
14 34 41.7	8.3	35 31.72	35 8.3	59 58.60	-18.57	-0 9.32	+9.56	-2.28	-4.70		14 35 22.14	51 32 40.6
14 36 48.3	6.9	37 36.76	37 20.9	36 46.95	-12.51	-0 9.33	+9.66	-2.29	-4.60		14 37 27.13	51 55 58.6
14 38 39.2	8.0	39 28.12	39 2.9	5 59.40	-19.60	-0 9.34	+9.96	-2.32	-4.60		14 39 18.42	52 26 39.5
14 39 44.0	8.4	40 33.44	40 10.0	20 4.30	-19.12	-0 9.29	+7.80	-2.26	-4.30		14 40 23.93	50 12 33.3
14 41 14.0	8.5	42 3.40	41 42.3	23 34.50	-16.52	-0 9.33	+9.99	-2.33	-4.50		14 41 53.70	52 9 7.8
14 41 42.7	9.1	42 32.70	42 51.2	27 52.70	+14.51	-0 9.33	+9.91	-2.32	-4.40		14 42 23.01	52 5 20.6
14 42 53.6	8.2	43 43.70	43 32.8	27 48.55	-8.93	-0 9.29	+8.04	-2.27	-4.00		14 43 34.17	50 4 59.9
14 44 10.7	8.5	44 57.50	44 42.6	58 3.40	-11.29	-0 9.37	+11.41	-2.38	-4.50		14 44 47.63	53 34 45.7
14 45 39.0	6.8	46 26.56	46 13.6	37 9.45	-10.00	-0 9.35	+10.71	-2.37	-4.40		14 46 16.74	52 55 40.4
14 46 45.6	9.2	47 33.82	47 24.7	47 37.05	-6.87	-0 9.37	+11.58	-2.40	-4.50		14 47 23.91	53 45 16.8
14 49 22.1	8.8	50 8.54	49 47.4	24 33.40	-15.77	-0 9.38	+12.09	-2.43	-4.40		14 49 58.55	54 8 12.3
14 51 4.0	7.7	51 48.14	51 28.1	22 35.45	-14.94	-0 9.35	+11.94	-2.44	-4.40		14 51 38.17	54 10 11.0
14 53 15.8	8.7	54 3.56	53 41.7	6 35.30	-17.04	-0 9.34	+10.08	-2.39	-4.00		14 53 53.71	52 26 7.7
14 56 24.3	9.0	57 11.32	56 53.6	39 2.20	-13.63	-0 9.35	+10.86	-2.42	-3.90		14 57 1.39	52 53 45.3
14 58 1.2	7.3	58 48.06	58 26.1	26 0.50	-17.24	-0 9.33	+9.70	-2.39	-3.70		14 58 38.20	52 6 42.5
14 59 33.5	8.8	0 20.64	0 0.0	7 35.45	-16.75	-0 9.30	+8.22	-2.35	-3.40		15 0 10.92	50 25 7.0
15 0 45.6	8.7	1 33.00	1 16.5	23 22.35	-13.49	-0 9.29	+8.09	-2.35	-3.40		15 1 23.29	50 9 23.3
15 1 41.7	8.6	2 26.98	2 12.7	21 59.55	-10.68	-0 9.38	+11.94	-2.48	-3.90		15 2 16.87	54 10 52.3
15 3 16.9	7.5	4 2.54	3 41.5	4 23.10	-15.95	-0 9.37	+11.42	-2.46	-3.70		15 3 52.49	53 28 23.3
15 4 19.4	7.0	5 4.56	4 50.0	48 31.55	-11.02	-0 9.37	+11.63	-2.48	-3.60		15 4 54.47	53 44 20.1
15 5 18.2	9.0	6 4.86	5 52.2	37 48.95	-9.77	-0 9.35	+10.78	-2.45	-3.40		15 5 54.85	52 55 3.4
15 6 45.3	9.2	7 32.18	7 13.3	21 9.25	-15.12	-0 9.31	+8.84	-2.40	-3.20		15 7 22.33	51 11 36.1
15 8 0.4	8.8	8 45.26	8 30.5	13 3.95	-11.01	-0 9.39	+12.19	-2.50	-3.60		15 8 35.08	54 19 48.5
15 15 40.5	8.8	16 27.12	16 8.6	49 59.95	-14.30	-0 9.33	+10.79	-2.48	-2.90		15 16 17.05	52 42 49.0
15 24 5.3	9.1	24 51.86	24 54.1	24 38.85	+1.68	-0 9.33	+11.21	-2.49	-2.50		15 24 41.77	52 8 27.5
15 26 52.7	9.3	27 36.28	27 15.2	7 8.55	-16.04	-0 9.37	+11.04	-2.55	-2.50		15 27 26.01	53 25 40.1
15 28 1.7	7.4	28 42.48	28 16.6	38 3.35	-19.00	-0 9.40	+12.87	-2.61	-2.80		15 28 32.04	54 53 44.0
15 31 12.9	8.4	31 56.14	31 35.6	41 57.15	-15.44	-0 9.38	+11.56	-2.50	-2.40		15 31 45.87	53 50 53.0
15 32 24.9	8.9	33 6.92	32 50.8	15 49.85	-12.00	-0 9.38	+11.93	-2.60	-2.30		15 32 56.52	54 17 4.3
15 33 48.7	5.5	34 29.78	34 13.6	37 46.40	-11.88	-0 9.40	+12.84	-2.63	-2.40		15 34 19.29	54 55 8.8
15 34 47.7	8.2	35 31.24	35 18.7	34 22.45	-9.83	-0 9.33	+10.04	-2.52	-2.00		15 35 21.08	51 58 32.5
15 36 31.9	9.6	37 16.04	36 57.8	27 29.15	-14.27	-0 9.33	+9.90	-2.46	-1.90		15 37 5.93	52 5 21.4
15 37 30.5	8.8	38 14.00	37 51.9	0 59.20	-17.16	-0 9.34	+10.14	-2.55	-1.90		15 38 3.76	52 31 48.8

ZONE 310, JUNE 30, 1874.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
14 50 10.0	8.5	50 59.26	50 36.9	17 20.00	-17.50	-0 10.51	+10.22	-2.33	-4.40	14 50 48.32	52 15 23.6
14 51 12.0	8.0	51 59.42	51 47.0	28 29.45	-9.51	-0 10.54	+11.25	-2.36	-4.50	14 51 48.38	53 4 23.1
14 52 31.9	8.7	53 18.92	52 59.2	39 7.30	-14.81	-0 10.57	+11.98	-2.39	-4.60	14 53 7.78	53 53 40.6
14 55 2.2	8.8	55 51.66	55 26.5	12 22.50	-20.53	-0 10.47	+8.23	-2.29	-3.90	14 55 40.85	50 20 16.8
14 55 55.8	7.7	56 46.56	56 22.4	28 20.60	-19.40	-0 10.48	+9.12	-2.31	-4.00	14 56 35.69	51 4 20.7
14 57 23.3	9.2	58 15.68	57 58.4	24 0.75	-13.85	-0 10.48	+9.35	-2.32	-3.90	14 58 4.79	51 8 46.5
15 1 6.9	9.1	1 56.44	1 34.3	34 40.45	-18.15	-0 10.46	+8.19	-2.31	-3.60	15 1 45.61	49 58 1.9
15 2 59.7	9.2	3 51.54	3 24.9	8 0.85	-21.17	-0 10.49	+9.40	-2.34	-3.70	15 3 40.58	51 24 39.7
15 4 20.6	9.0	5 10.10	4 46.6	42 46.55	-19.44	-0 10.46	+7.97	-2.35	-3.70	15 4 59.22	49 49 54.4
15 5 21.3	9.5	6 10.20	5 56.0	48 19.50	-11.47	-0 10.47	+8.89	-2.35	-3.60	15 5 59.27	50 44 30.4
15 6 7.2	9.2	6 57.20	7 10.5	58 44.45	+10.78	-0 10.47	+8.75	-2.35	-3.40	15 6 46.27	50 34 27.9
15 7 18.8	9.0	8 4.94	7 57.2	27 33.40	-6.04	-0 10.51	+10.19	-2.39	-3.70	15 7 53.86	52 5 23.3
15 8 0.4	8.7	8 46.56	8 35.7	13 9.05	-8.11	-0 10.59	+12.54	-2.46	-4.00	15 8 35.22	54 19 47.7
15 9 52.5	...	10 40.54	10 18.5	36 47.75	-17.32	-0 10.52	+9.84	-2.40	-3.50	15 10 29.43	51 55 57.7
15 10 43.4	9.2	11 30.66	11 20.4	43 12.10	-7.94	-0 10.54	+10.99	-2.43	-3.60	15 11 19.45	52 49 43.9
15 13 49.7	8.0	14 35.30	14 6.0	28 18.75	-22.98	-0 10.52	+10.06	-2.42	-3.40	15 14 24.14	52 4 21.6
15 15 34.2	8.4	16 21.10	16 56.1	49 19.55	+27.06	-0 10.53	+10.71	-2.44	-3.30	15 16 9.87	52 44 11.8
15 15 40.5	9.2	16 28.08	15 55.2	49 51.70	-25.43	-0 10.53	+10.82	-2.44	-3.30	15 16 16.85	52 42 47.2
15 17 15.2	7.5	18 1.60	17 50.6	45 23.65	-8.49	-0 10.53	+10.66	-2.45	-3.30	15 17 50.35	52 47 32.2
15 18 38.2	8.6	19 24.24	19 8.0	57 1.65	-12.56	-0 10.53	+10.60	-2.45	-3.20	15 19 13.00	52 35 50.2
15 20 33.5	8.2	21 19.88	20 54.1	26 16.75	-20.22	-0 10.52	+9.91	-2.44	-3.00	15 21 8.67	52 6 27.1
15 22 41.2	9.4	23 28.04	23 4.3	7 40.65	-18.87	-0 10.50	+9.42	-2.43	-3.00	15 23 16.88	51 25 4.2
15 23 48.2	9.3	24 35.56	24 17.0	31 59.10	-14.94	-0 10.49	+8.99	-2.42	-2.80	15 24 24.44	51 0 49.5
15 24 53.5	8.9	25 40.46	25 17.6	13 19.10	-18.26	-0 10.50	+9.43	-2.43	-2.70	15 25 29.30	51 19 26.8
15 25 47.1	9.3	26 32.16	26 23.6	2 26.40	-6.53	-0 10.56	+11.63	-2.51	-3.00	15 26 20.75	53 30 33.2
15 27 11.1	8.3	27 55.30	27 33.7	32 53.15	-15.81	-0 10.60	+13.18	-2.56	-3.20	15 27 43.71	54 59 58.6
15 54 22.5	5.0	55 1.44	54 35.7	26 38.65	-18.76	-0 10.61	+13.11	-2.66	-1.90	15 54 49.60	55 6 13.4
15 55 27.4	9.6	56 8.38	55 45.7	36 19.65	-16.64	-0 10.61	+12.93	-2.65	-1.80	15 55 56.56	54 56 34.5
15 56 37.6	9.1	57 24.04	57 0.2	40 41.45	-19.58	-0 10.48	+7.75	-2.53	-1.20	15 57 12.74	49 52 5.3
15 57 33.0	7.0	58 16.26	58 2.8	4 42.10	-10.50	-0 10.54	+10.82	-2.58	-1.40	15 58 4.71	52 28 16.6
15 59 8.1	9.2	59 50.90	59 24.6	58 19.15	-20.40	-0 10.54	+10.63	-2.58	-1.40	15 59 39.34	52 34 29.6
16 1 9.5	8.6	1 53.82	1 33.0	9 27.80	-16.20	-0 10.55	+10.64	-2.58	-1.20	16 1 42.25	52 23 25.5
16 2 21.0	9.5	3 2.86	2 47.2	7 2.25	-11.65	-0 10.55	+10.46	-2.58	-1.20	16 2 51.29	52 25 55.5
16 4 17.0	8.7	4 59.04	4 42.2	53 20.80	-13.00	-0 10.55	+10.84	-2.59	-1.10	16 4 47.44	52 39 36.3
16 4 53.9	8.6	5 39.32	5 50.2	22 12.95	+8.72	-0 10.51	+9.27	-2.55	-0.90	16 5 27.87	51 11 4.5
16 7 1.7	8.4	7 43.88	7 18.4	5 10.30	-19.83	-0 10.55	+10.20	-2.60	-1.00	16 7 32.27	52 27 39.6
16 8 51.2	9.0	9 33.50	9 11.6	27 57.70	-17.18	-0 10.54	+10.17	-2.59	-0.80	16 9 21.92	52 4 55.2
16 10 30.0	9.0	11 13.00	10 49.1	15 57.10	-18.66	-0 10.54	+10.12	-2.57	-1.20	16 11 1.43	52 16 54.0
16 11 33.5	8.9	12 16.22	11 47.1	12 24.40	-22.69	-0 10.54	+10.25	-2.57	-1.20	16 12 4.63	52 20 22.8

ZONE 311, JULY 1, 1874.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red to Horiz. Wire.	Sum of Reductions.	Sum of Reductions.	Reduction to beginning of current year.	Reduction to beginning of current year.	Mean R. A. 1875.0.	Mean Dec. 1875.0.
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
14 50 10.0	8.8	50 59.90	50 48.8	9 11.00	-10.91	-0 11.21	+10.54	-2.31	-4.60	14 50 48.28	52 15 22.2
14 51 12.0	8.0	52 0.02	51 42.7	20 9.35	-13.27	-0 11.25	+10.86	-2.34	-4.70	14 51 48.29	53 4 21.7
14 52 31.9	8.8	53 19.56	52 55.7	30 47.10	-17.97	-0 11.28	+11.70	-2.37	-4.70	14 53 7.73	53 53 40.2
14 55 2.2	9.0	55 52.28	55 28.2	4 5.55	-19.62	-0 11.17	+8.31	-2.27	-4.00	14 55 40.79	50 20 17.6
14 55 55.8	8.0	56 47.08	56 25.1	20 4.55	-17.64	-0 11.18	+8.80	-2.29	-4.10	14 56 35.53	51 4 21.0
14 57 23.3	9.4	58 16.32	57 51.1	15 37.95	-20.18	-0 11.20	+8.88	-2.30	-4.10	14 58 4.73	51 8 45.2
15 1 6.9	9.0	1 56.94	1 26.8	26 17.55	-24.71	-0 11.17	+7.67	-2.29	-3.70	15 1 45.42	49 58 0.5
15 2 59.7	9.2	3 52.04	3 28.9	59 47.50	-18.39	-0 11.20	+10.55	-2.33	-3.80	15 3 40.38	51 24 39.8
15 4 20.6	8.8	5 10.74	4 52.5	34 34.15	-14.98	-0 11.17	+8.20	-2.33	-3.90	15 4 59.17	49 49 54.2

R. A. 1855.o. According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.o.	Mean Dec. 1875.o.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
15 5 21.3	9.5	6 10.86	5 59.9	40 5.90	- 8.88	-0 11.19	+ 8.54	-2.33	- 3.80	15 5 59.23	50 44 29.0
15 7 18.8	9.2	8 5.56	7 47.6	19 8.10	-14.11	-0 11.22	+10.28	-2.37	- 3.80	15 7 53.79	52 5 23.5
15 8 0.4	8.8	8 47.18	8 35.1	4 51.30	- 9.00	- 0 11.29	+12.71	-2.44	- 4.10	15 8 35.16	54 19 47.5
15 10 43.4	9.2	11 31.20	11 19.2	34 53.10	- 9.25	-0 11.24	+11.16	-2.41	- 3.80	15 11 19.31	52 49 44.4
15 13 49.7	7.7	14 35.96	14 13.7	20 8.55	-17.49	-0 11.22	+ 9.81	-2.39	- 3.50	15 14 24.13	52 4 19.9
15 15 34.2	8.8	16 21.74	16 58.8	41 5.00	+28.69	-0 11.23	+10.41	-2.42	- 3.50	15 16 9.83	52 44 10.3
15 15 40.5	9.1	16 28.56	16 6.4	41 43.80	-17.15	-0 11.23	+10.61	-2.42	- 3.50	15 16 16.65	52 42 45.9
15 17 15.2	7.5	18 2.12	17 44.2	37 1.00	-13.81	-0 11.23	+10.78	-2.43	- 3.50	15 17 50.19	52 47 32.3
15 18 38.2	8.8	19 24.98	19 1.5	48 39.45	-18.22	-0 11.23	+10.70	-2.43	- 3.40	15 19 13.06	52 35 49.5
15 20 33.5	8.5	21 20.44	20 57.1	18 1.90	-18.26	-0 11.22	+10.14	-2.42	- 3.20	15 21 8.55	52 6 26.8
15 22 41.2	9.8	23 28.68	23 10.7	59 29.80	-14.33	-0 11.20	+ 9.67	-2.41	- 3.20	15 23 16.84	51 25 2.5
15 23 48.2	9.7	24 36.10	24 10.2	23 36.40	-20.80	-0 11.19	+ 9.06	-2.40	- 2.90	15 24 24.30	51 0 49.2
15 24 53.5	9.4	25 41.22	25 18.6	5 1.75	-18.02	-0 11.19	+ 9.59	-2.41	- 2.90	15 25 29.39	51 19 27.3
15 25 47.1	9.4	26 32.82	26 21.5	54 8.15	- 8.57	-0 11.27	+11.68	-2.49	- 3.20	15 26 20.72	53 30 32.2
15 27 11.1	8.4	27 55.88	27 37.7	24 39.40	-13.33	-0 11.32	+13.40	-2.54	- 3.40	15 27 43.59	54 59 57.8
15 54 22.5	6.0	55 2.20	54 35.5	18 20.75	-19.49	-0 11.32	+13.27	-2.64	- 2.10	15 54 49.67	55 6 13.4
15 56 37.6	9.4	57 24.72	57 4.9	32 26.85	-16.29	-0 11.19	+ 7.97	-2.51	- 1.50	15 57 12.73	49 52 6.0
15 57 33.0	8.8	58 16.94	58 3.8	56 23.95	-10.19	-0 11.25	+10.45	-2.56	- 1.60	15 58 4.70	52 28 17.4
15 59 8.1	9.5	59 51.70	59 30.6	50 3.80	-16.37	-0 11.25	+10.45	-2.56	- 1.60	15 59 39.45	52 34 31.5
16 1 9.5	8.8	1 54.38	1 25.4	1 4.65	-22.59	-0 11.25	+10.06	-2.56	- 1.40	16 1 42.13	52 23 24.4
16 4 17.0	9.2	4 59.66	4 51.7	45 9.10	- 6.19	-0 11.26	+10.54	-2.58	- 1.30	16 4 47.36	52 39 37.2
ZONE 312, JULY 6, 1874.											
15 8 26.8	7.5	9 17.06	8 49.6	9 46.30	-22.44	-0 13.01	+ 8.52	-2.43	- 1.90	15 9 3.51	50 14 35.8
15 9 30.5	8.2	10 21.24	10 2.7	40 53.90	-14.95	-0 13.02	+ 8.71	-2.45	- 1.90	15 10 7.64	50 43 35.9
15 10 44.9	9.0	11 36.90	11 18.3	11 38.85	-15.19	-0 13.01	+ 8.24	-2.44	- 1.80	15 11 23.33	50 12 50.5
*15 18 31.9	8.7	19 21.26	19 9.4	0 16.50	- 8.84	-0 13.11	+12.56	-2.60	- 2.00	15 19 7.19	54 24 23.8
15 19 48.4	8.8	20 34.40	20 15.1	16 50.60	-14.43	-0 13.10	+12.35	-2.58	- 1.90	15 20 20.37	54 7 44.1
15 22 35.4	6.8	23 22.42	23 7.8	57 11.90	-10.83	-0 13.12	+12.79	-2.58	- 1.80	15 23 8.34	54 27 27.1
15 24 5.3	9.0	24 55.40	24 38.2	16 6.80	-13.47	-0 13.06	+10.24	-2.57	- 1.50	15 24 41.50	52 8 27.4
16 12 16.3	6.5	12 58.44	12 48.0	51 48.05	- 7.89	-0 13.10	+11.81	-2.54	- 2.20	16 12 44.26	53 32 56.2
16 13 38.5	9.0	14 22.56	14 18.0	44 7.20	- 3.56	-0 13.07	+11.17	-2.52	- 2.00	16 14 8.47	52 40 41.0
16 16 3.9	8.9	16 45.08	16 20.3	18 4.45	-18.11	-0 13.14	+13.51	-2.60	- 2.20	16 16 30.69	55 6 31.5
16 17 30.9	8.0	18 13.84	17 50.7	43 45.00	-17.04	-0 13.13	+13.13	-2.59	- 2.10	16 17 59.49	54 40 51.9
16 18 28.4	8.5	19 10.48	19 4.9	3 27.35	- 4.17	-0 13.13	+12.86	-2.58	- 2.00	16 18 56.16	54 21 22.3
16 19 53.2	...	20 40.56	20 24.8	43 46.85	-12.66	-0 13.05	+10.06	-2.50	- 1.70	16 20 26.55	51 40 51.9
16 24 31.6	8.3	25 11.42	24 55.5	36 26.60	-11.70	-0 13.14	+13.11	-2.61	- 1.80	16 24 57.01	54 48 16.5
16 25 21.0	8.4	26 5.44	25 47.5	22 12.85	-14.36	-0 13.04	+ 9.21	-2.49	- 1.40	16 25 51.47	51 2 24.1
16 27 2.3	9.2	27 46.80	27 31.1	40 45.60	-12.41	-0 13.06	+ 9.80	-2.52	- 1.40	16 27 32.73	51 43 54.0
16 29 19.9	8.9	30 1.56	29 46.3	30 17.05	-11.23	-0 13.14	+13.13	-2.62	- 1.70	16 29 47.12	54 54 27.0
16 30 40.6	9.0	31 21.96	30 51.2	24 34.20	-22.55	-0 13.14	+13.48	-2.63	- 1.60	16 31 7.49	54 59 59.1
16 31 43.9	9.8	32 25.86	32 8.0	39 8.35	-13.18	-0 13.14	+13.31	-2.62	- 1.50	16 32 11.42	54 45 34.3
16 33 50.2	8.8	34 29.24	34 8.2	33 15.95	-15.43	-0 13.14	+13.31	-2.61	- 1.50	16 34 14.79	54 51 24.6
16 34 50.0	8.9	35 31.46	35 5.7	19 26.20	-19.32	-0 13.11	+12.49	-2.61	- 1.30	16 35 17.09	54 5 10.0
ZONE 313, JULY 13, 1874.											
16 12 16.3	7.2	13 3.28	12 35.7	51 35.10	-20.93	-0 17.91	+11.36	-2.40	- 3.60	16 12 44.43	53 32 55.4
16 13 38.5	9.0	14 27.30	14 2.8	43 50.30	-18.96	-0 17.88	+10.60	-2.39	- 3.40	16 14 8.53	52 40 41.7
16 14 49.9	9.3	15 39.36	15 20.1	46 34.30	-15.29	-0 17.86	+ 9.46	-2.36	- 3.30	16 15 20.70	51 38 0.4
16 16 3.9	8.6	16 49.88	16 26.6	18 5.05	-17.01	-0 17.95	+13.10	-2.45	- 3.60	16 16 30.83	55 6 31.4

* 15 19 [7.19]

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	s	s	"	h m s	° ' "
16 17 30.9	7.7	18 18.56	17 51.7	43 41.50	-19.85	-0 17.94	+12.64	-2.45	-3.50	16 17 59.54	54 40 51.9
16 18 28.4	8.7	19 15.28	18 48.5	3 11.20	-19.93	-0 17.94	+12.28	-2.44	-3.30	16 18 56.29	54 21 22.0
16 19 53.2	9.2	20 44.98	20 24.5	43 42.85	-16.22	-0 17.86	+9.61	-2.38	-3.10	16 20 26.28	51 40 51.7
16 24 31.6	8.7	25 16.20	24 51.3	36 18.80	-18.32	-0 17.95	+12.68	-2.47	-3.30	16 24 57.12	54 48 16.9
16 25 21.0	8.0	26 10.18	25 51.8	22 11.95	-14.76	-0 17.85	+8.90	-2.37	-2.80	16 25 51.52	51 2 24.1
16 27 2.3	9.4	27 51.54	27 47.0	40 54.65	-3.56	-0 17.86	+9.62	-2.40	-2.70	16 27 32.79	51 43 53.6
16 28 19.6	9.7	29 11.36	29 5.5	22 45.00	-4.84	-0 17.85	+7.97	-2.46	-3.10	16 28 52.65	50 2 0.0
16 29 19.9	8.8	30 6.32	29 57.3	30 21.05	-6.61	-0 17.96	+12.88	-2.48	-3.20	16 29 47.20	54 54 27.0
16 30 40.6	8.8	31 26.65	31 10.0	24 43.00	-12.15	-0 17.96	+13.14	-2.50	-3.10	16 31 7.49	55 0 0.0
16 31 43.9	9.0	32 30.58	32 9.8	39 4.25	-15.31	-0 17.96	+12.75	-2.49	-2.90	16 32 11.45	54 45 35.5
16 33 50.2	8.9	34 34.02	34 6.2	33 9.60	-20.42	-0 17.96	+12.78	-2.50	-3.00	16 34 14.86	54 51 25.2
16 34 50.0	9.0	35 36.28	35 16.9	19 30.80	-14.52	-0 17.93	+12.21	-2.48	-2.90	16 35 17.22	54 5 9.5
16 36 30.9	8.4	37 17.14	36 52.4	46 35.65	-18.25	-0 17.95	+12.53	-2.50	-2.90	16 36 58.00	54 38 1.3
ZONE 314, JULY 14, 1874.											
16 16 44.4	9.0	17 36.44	17 16.6	19 10.75	-16.21	-0 18.57	+7.92	-2.31	-3.30	16 17 17.19	50 5 23.9
16 17 44.8	9.2	18 37.33	18 14.5	43 25.70	-18.44	-0 18.58	+8.49	-2.33	-3.30	16 18 18.02	50 41 7.3
16 18 41.6	8.5	19 28.98	19 12.2	35 51.60	-12.36	-0 18.67	+12.69	-2.43	-3.70	16 19 9.24	54 48 51.4
16 20 5.2	...	20 56.64	20 37.1	55 11.55	-15.83	-0 18.58	+8.20	-2.35	-3.20	16 20 37.31	50 29 24.1
16 24 26.1	9.9	25 18.18	25 39.3	28 36.10	+17.34	-0 18.57	+7.79	-2.36	-3.10	16 24 58.87	49 56 32.8
16 25 21.0	8.0	26 10.96	26 4.0	22 22.60	-5.62	-0 18.59	+8.92	-2.36	-3.10	16 25 51.57	51 2 24.5
16 41 19.6	8.6	42 12.94	41 52.0	46 11.30	-18.55	-0 18.61	+9.40	-2.42	-2.70	16 41 53.39	51 38 25.0
16 42 24.9	9.1	43 15.78	43 8.8	51 28.25	-5.68	-0 18.58	+8.42	-2.40	-2.50	16 42 56.34	50 33 20.3
16 44 25.5	8.8	45 16.24	45 1.6	52 21.90	-11.84	-0 18.58	+8.37	-2.41	-2.50	16 44 56.79	50 32 20.6
16 46 8.8	9.0	46 58.69	46 24.2	32 25.05	-26.59	-0 18.64	+10.53	-2.46	-2.60	16 46 38.99	52 52 3.9
16 47 10.2	9.0	47 58.46	47 52.5	1 33.80	-4.67	-0 18.63	+10.28	-2.45	-2.60	16 47 38.80	52 23 17.9
16 49 27.7	8.2	50 13.16	49 49.1	37 29.55	-17.74	-0 18.68	+12.67	-2.52	-2.70	16 49 53.23	54 47 11.6
16 50 32.3	9.5	51 22.58	51 7.5	44 0.50	-12.21	-0 18.58	+8.57	-2.42	-2.30	16 51 3.09	50 40 42.5
16 52 24.7	7.3	53 14.00	52 56.0	10 32.95	-14.70	-0 18.57	+7.96	-2.42	-2.20	16 52 54.54	50 14 7.2
16 54 11.5	9.6	55 2.40	54 43.5	19 20.30	-15.48	-0 18.57	+7.95	-2.42	-2.10	16 54 42.95	50 5 19.3
16 54 54.6	9.7	55 45.24	56 22.5	3 3.25	+30.37	-0 18.58	+8.17	-2.43	-2.10	16 55 25.75	50 22 22.5
16 56 47.3	7.1	57 34.08	57 5.0	10 56.80	-22.23	-0 18.65	+10.93	-2.50	-2.30	16 57 14.28	53 13 39.1
16 57 59.2	9.1	58 48.14	58 29.4	49 37.20	-14.17	-0 18.66	+11.58	-2.51	-2.30	16 58 28.29	53 35 7.5
16 58 43.9	7.5	59 31.02	59 18.1	17 26.15	-10.11	-0 18.61	+10.00	-2.47	-2.20	16 59 11.35	52 7 21.2
ZONE 315, JULY 18, 1874.											
16 16 44.4	8.8	17 40.16	17 27.1	19 16.60	-10.48	-0 22.39	+7.96	-2.27	-4.00	16 17 17.13	50 5 23.1
16 17 44.8	9.3	18 41.22	18 33.8	43 38.35	-5.98	-0 22.40	+8.61	-2.25	-4.00	16 18 18.17	50 41 6.6
16 18 41.6	8.4	19 32.70	20 3.8	36 26.30	+22.88	-0 22.51	+12.64	-2.33	-4.40	16 19 9.22	54 48 51.2
16 20 5.2	7.7	21 0.44	20 33.3	55 5.40	-22.00	-0 22.40	+8.16	-2.26	-3.90	16 20 37.38	50 29 23.3
16 24 26.1	9.5	25 21.72	25 4.8	28 5.60	-13.88	-0 22.39	+7.81	-2.26	-3.80	16 24 58.69	49 56 31.3
16 25 21.0	7.7	26 14.64	26 3.4	22 19.15	-8.99	-0 22.41	+8.95	-2.28	-3.80	16 25 51.51	51 2 23.9
16 41 19.6	8.7	42 16.86	41 46.7	46 3.55	-23.92	-0 22.43	+9.32	-2.35	-3.50	16 41 53.56	51 38 26.5
16 42 24.9	9.0	43 19.50	42 47.7	51 6.65	-25.77	-0 22.42	+8.18	-2.33	-3.40	16 42 56.29	50 33 20.6
16 44 25.5	8.7	45 20.04	44 57.0	52 14.95	-18.65	-0 22.42	+8.31	-2.34	-3.30	16 44 56.82	50 32 19.9
16 46 8.8	9.0	47 2.56	46 33.7	32 30.40	-22.27	-0 22.48	+10.66	-2.39	-3.50	16 46 39.09	52 52 3.1
16 47 10.2	8.5	48 2.32	47 33.6	1 16.40	-22.35	-0 22.46	+10.12	-2.38	-3.40	16 47 38.90	52 23 16.6
16 49 27.7	7.8	50 16.92	49 36.3	37 16.45	-29.87	-0 22.53	+12.45	-2.44	-3.70	16 49 53.22	54 47 11.3
16 50 32.3	9.2	51 26.44	51 0.2	43 50.30	-21.19	-0 22.42	+8.48	-2.36	-3.10	16 51 3.17	50 40 42.8
16 52 24.7	6.8	53 17.82	52 53.1	10 26.30	-20.17	-0 22.42	+7.94	-2.35	-3.00	16 52 54.58	50 14 7.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
16 54 11.5	9.3	55 6.16	54 40.9	19 13.90	-20.71	-0 22.41	+ 7.86	-2.35	- 3.00	16 54 42.94	50 5 19.5
16 54 54.6	9.3	55 48.86	55 34.2	2 20.60	-11.96	-0 22.42	+ 8.25	-2.36	- 3.00	16 55 25.60	50 22 22.0
16 56 47.3	7.8	57 37.88	57 10.6	10 56.20	-20.86	-0 22.49	+ 11.04	-2.42	- 3.20	16 57 14.32	53 13 40.2
16 57 59.2	9.0	58 51.80	58 25.7	49 29.70	-19.78	-0 22.50	+ 11.50	-2.43	- 3.20	16 58 28.19	53 35 8.4
16 58 43.9	7.7	59 34.74	59 20.8	17 23.90	-10.90	-0 22.45	+ 10.03	-2.40	- 3.00	16 59 11.30	52 7 21.9
17 1 5.0	8.4	1 59.34	1 32.6	4 41.95	-20.83	-0 22.46	+ 10.16	-2.42	- 3.00	17 1 35.86	52 19 54.2
17 2 32.5	8.0	3 25.50	2 58.4	12 33.10	-21.20	-0 22.46	+ 9.99	-2.42	- 2.90	17 3 2.02	52 12 2.8
17 6 11.8	9.3	7 2.52	6 31.4	10 0.10	-23.75	-0 22.50	+ 11.07	-2.45	- 2.90	17 6 38.90	53 14 34.6
17 7 24.4	9.1	8 18.42	8 2.6	48 56.05	-12.53	-0 22.45	+ 9.53	-2.41	- 2.70	17 7 54.99	51 35 48.6
17 8 3.1	9.0	8 55.86	9 12.2	53 31.90	+ 12.95	-0 22.45	+ 9.44	-2.41	- 2.70	17 8 32.43	51 31 38.2
17 9 53.6	8.7	10 44.72	10 18.2	8 39.45	-19.75	-0 22.52	+ 12.21	-2.48	- 2.90	17 10 20.98	54 16 0.7
17 10 58.8	9.0	11 50.18	11 29.7	3 7.30	-15.24	-0 22.53	+ 12.38	-2.48	- 2.90	17 11 26.42	54 21 37.6
17 14 42.6	8.1	15 34.40	15 7.4	56 27.10	-20.66	-0 22.47	+ 10.25	-2.45	- 2.60	17 15 10.74	52 28 10.9
ZONE 316, JULY 21, 1874.											
16 16 44.4	8.9	17 43.56	17 18.2	19 5.70	-20.80	-0 25.83	+ 7.78	-2.20	- 4.50	16 17 17.16	50 5 22.3
16 17 44.8	9.2	18 44.46	18 25.3	43 28.70	-15.53	-0 25.84	+ 9.47	-2.19	- 4.50	16 18 18.03	50 41 6.4
16 18 41.6	8.5	19 36.10	19 21.8	35 51.95	-10.52	-0 25.95	+ 12.79	-2.26	- 4.90	16 19 9.25	54 48 51.1
16 20 5.2	8.3	21 3.80	20 38.7	55 6.75	-20.38	-0 25.84	+ 8.17	-2.19	- 4.50	16 20 37.37	50 29 22.3
16 25 21.0	8.3	26 18.02	25 53.2	22 7.75	-19.89	-0 25.85	+ 8.75	-2.22	- 4.40	16 25 51.51	51 2 22.9
16 41 19.6	8.8	42 20.04	42 1.2	46 11.20	-14.89	-0 25.87	+ 9.42	-2.29	- 4.10	16 41 53.36	51 38 26.8
16 42 24.9	9.0	43 22.78	43 4.1	51 16.70	-15.16	-0 25.85	+ 8.34	-2.27	- 3.90	16 42 56.20	50 33 20.2
16 44 25.5	8.5	45 23.38	44 58.3	52 14.20	-20.36	-0 25.85	+ 8.24	-2.28	- 3.90	16 44 56.79	50 32 17.6
16 46 8.8	9.0	47 5.88	46 39.7	32 30.70	-20.19	-0 25.91	+ 10.65	-2.32	- 4.10	16 46 39.05	52 52 3.6
16 47 10.2	8.8	48 5.60	47 45.4	1 21.00	-15.73	-0 25.89	+ 10.20	-2.32	- 4.00	16 47 38.81	52 23 17.4
16 49 27.7	7.8	50 20.26	49 40.1	37 15.45	-29.58	-0 25.96	+ 12.42	-2.37	- 4.20	16 49 53.20	54 47 11.4
16 50 32.3	9.3	51 29.68	51 7.6	43 51.95	-17.87	-0 25.85	+ 8.46	-2.30	- 3.70	16 51 3.04	50 40 43.2
16 52 24.7	6.8	53 21.26	52 48.5	10 18.50	-26.78	-0 25.84	+ 7.78	-2.29	- 3.60	16 52 54.66	50 14 7.4
16 54 11.5	9.5	55 9.44	54 42.7	19 12.85	-21.86	-0 25.84	+ 7.77	-2.29	- 3.60	16 54 42.85	50 5 18.1
16 54 54.6	9.4	55 52.24	55 38.3	2 20.00	-11.39	-0 25.85	+ 8.21	-2.30	- 3.60	16 55 25.61	50 22 21.9
16 56 47.3	6.9	57 41.28	57 14.4	10 55.45	-20.55	-0 25.92	+ 11.01	-2.36	- 3.80	16 57 14.35	53 13 40.0
16 57 59.2	8.8	58 55.26	58 33.3	49 31.65	-16.67	-0 25.93	+ 11.48	-2.37	- 3.80	16 58 28.28	53 35 8.3
16 58 43.9	7.8	59 38.00	59 22.1	17 20.75	-12.46	-0 25.88	+ 9.97	-2.34	- 3.60	16 59 11.19	52 7 22.1
17 1 5.0	8.7	2 2.70	1 37.1	4 43.20	-19.97	-0 25.89	+ 10.12	-2.36	- 3.60	17 1 35.85	52 19 52.5
17 2 32.5	8.2	3 28.88	3 3.3	12 33.40	-20.03	-0 25.88	+ 9.96	-2.36	- 3.60	17 3 2.04	52 12 2.2
17 3 29.0	9.0	4 25.00	4 2.2	21 15.95	-18.29	-0 25.87	+ 8.81	-2.34	- 2.70	17 3 58.26	51 3 21.3
17 6 11.8	9.4	7 5.88	6 34.1	9 58.80	-24.29	-0 25.93	+ 10.98	-2.39	- 3.60	17 6 38.89	53 14 33.9
17 7 24.4	9.2	8 21.68	8 0.9	48 51.60	-16.49	-0 25.88	+ 9.41	-2.35	- 3.40	17 7 54.88	51 35 47.6
17 8 3.1	9.0	8 59.52	8 57.2	53 16.75	- 1.83	-0 25.88	+ 9.44	-2.35	- 3.40	17 8 32.72	51 31 37.2
17 9 53.6	8.7	10 48.04	10 24.2	8 40.30	-17.74	-0 25.96	+ 12.19	-2.40	- 3.80	17 10 20.94	54 16 0.3
17 10 58.8	8.8	11 53.60	11 37.3	3 9.25	-12.12	-0 25.96	+ 12.37	-2.39	- 3.80	17 11 26.50	54 21 37.2
17 14 42.6	8.0	15 37.72	15 14.1	56 28.60	-18.35	-0 25.90	+ 10.26	-2.38	- 3.50	17 15 10.80	52 28 10.1
ZONE 317, JULY 22, 1874.											
16 24 31.6	8.8	25 24.90	25 6.0	36 25.15	-13.91	-0 26.91	+ 12.69	-2.26	- 5.00	16 24 57.07	54 48 16.1
16 31 11.9	9.2	32 9.18	31 44.4	40 58.30	-19.17	-0 26.86	+ 10.44	-2.24	- 4.60	16 31 41.52	52 43 36.4
16 45 51.4	8.6	46 46.80	46 24.3	9 59.00	-16.78	-0 26.92	+ 12.19	-2.31	- 4.60	16 46 18.88	54 14 41.0
16 47 20.7	8.0	48 17.22	48 1.4	4 16.45	-12.60	-0 26.84	+ 9.17	-2.28	- 4.10	16 47 49.58	51 20 25.4
17 2 17.1	9.5	3 14.16	3 0.6	52 11.60	-10.79	-0 26.84	+ 9.39	-2.32	- 3.60	17 2 46.44	51 32 34.0
17 6 46.3	8.8	7 43.20	7 15.8	1 46.60	-21.83	-0 26.85	+ 9.11	-2.34	- 3.60	17 7 15.45	51 22 48.1

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	° "	"	m s	"	s	"	h m s	° ' "
17 7 54.0	6.7	8 48.50	8 18.1	30 15.20	-23.94	-0 26.87	+ 9.56	-2.35	- 3.60	17 8 20.69	51 54 17.9
17 10 49.7	9.0	11 45.06	11 18.1	39 22.20	-20.86	-0 26.89	+10.53	-2.37	- 3.70	17 11 17.15	52 45 15.1
17 12 33.9	7.8	13 30.12	13 3.0	28 1.10	-21.32	-0 26.86	+ 9.67	-2.36	- 3.60	17 13 2.30	51 56 35.2
17 14 35.3	9.0	15 33.48	15 7.3	24 55.55	-21.50	-0 26.82	+ 7.71	-2.33	- 3.30	17 15 5.84	49 59 39.0
17 17 3.7	9.5	18 0.22	17 46.3	45 39.50	-11.01	-0 26.85	+ 9.50	-2.37	- 3.40	17 17 32.41	51 39 7.5
17 17 51.7	9.4	18 50.64	19 24.7	22 49.35	+27.96	-0 26.86	+ 7.60	-2.34	- 3.20	17 18 22.94	50 2 35.0
17 18 53.8	8.9	19 50.18	20 29.6	26 24.45	+31.66	-0 26.84	+ 8.50	-2.36	- 3.30	17 19 22.43	50 59 4.4
17 19 48.6	8.3	20 45.07	20 57.8	45 0.35	+10.05	-0 26.86	+ 9.61	-2.38	- 3.40	17 20 17.24	51 40 8.0
17 23 44.2	8.3	24 38.76	24 19.4	25 14.20	-15.30	-0 26.88	+ 9.80	-2.39	- 3.30	17 24 10.87	51 59 29.5
17 25 29.2	8.7	26 25.36	25 44.8	26 19.10	-32.64	-0 26.85	+ 8.44	-2.38	- 3.10	17 25 57.57	50 58 6.2
17 25 29.2	8.6	26 25.68	25 45.8	26 19.10	-32.07	-0 26.85	+ 8.46	-2.38	- 3.10	17 25 57.89	50 58 6.8
17 27 2.3	9.1	27 57.68	27 32.9	14 17.90	-18.97	-0 26.92	+11.04	-2.42	- 3.30	17 27 29.64	53 10 23.6
17 28 4.2	7.7	29 0.38	28 39.8	38 26.35	-16.63	-0 26.85	+ 8.57	-2.38	- 3.10	17 28 32.60	50 46 15.3
17 29 14.3	9.0	30 9.80	29 43.0	28 46.60	-21.56	-0 26.85	+ 8.68	-2.38	- 3.00	17 29 42.01	50 55 50.4
17 30 8.6	9.6	31 5.42	30 51.2	30 13.75	-11.43	-0 26.85	+ 8.76	-2.39	- 3.00	17 30 37.62	50 54 33.6
17 31 56.7	9.8	32 52.60	32 46.4	20 30.55	- 4.86	-0 26.87	+ 9.99	-2.41	- 3.10	17 32 24.69	52 4 24.6
17 33 18.9	7.8	34 15.04	33 54.0	21 7.40	-16.84	-0 26.85	+ 8.87	-2.40	- 3.00	17 33 47.22	51 3 34.9
17 34 28.8	9.1	35 26.14	35 6.6	58 9.85	-15.51	-0 26.86	+ 9.29	-2.40	- 3.00	17 34 58.28	51 26 34.3
17 37 18.1	8.3	38 11.54	37 51.5	0 51.50	-15.22	-0 26.92	+11.32	-2.45	- 3.00	17 37 43.45	53 23 55.2
17 37 59.5	8.1	38 55.70	38 40.7	52 52.25	-11.91	-0 26.86	+ 9.42	-2.42	- 2.90	17 38 27.82	51 31 56.1
17 39 19.5	8.6	40 16.66	40 8.8	43 42.50	- 6.33	-0 26.87	+ 9.62	-2.42	- 2.90	17 39 48.76	51 41 11.7
17 41 27.8	9.4	42 24.20	42 16.8	26 38.45	- 5.82	-0 26.88	+ 9.91	-2.43	- 2.80	17 41 56.26	51 58 16.8
17 43 9.4	9.3	44 6.10	43 51.4	59 9.95	-11.70	-0 26.87	+ 9.36	-2.42	- 2.80	17 43 38.21	51 25 39.1
17 45 37.1	5.0	46 33.14	45 58.1	35 50.80	-26.61	-0 26.86	+ 8.45	-2.42	- 2.70	17 46 5.29	50 48 42.7
17 46 52.3	9.3	47 46.22	47 21.2	0 42.60	-19.91	-0 26.87	+ 9.18	-2.43	- 2.70	17 47 18.32	51 23 58.4
17 48 13.8	8.2	49 9.24	48 34.6	15 53.75	-27.70	-0 26.86	+ 8.77	-2.43	- 2.60	17 48 41.36	51 8 39.3
17 50 2.8	8.8	50 57.98	50 29.4	47 42.50	-22.67	-0 26.87	+ 9.38	-2.41	- 2.80	17 50 30.08	51 36 56.2
ZONE 318, JULY 23, 1874.											
16 24 31.6	8.8	25 25.84	25 52.8	36 59.65	+19.87	-0 27.86	+12.65	-2.23	- 5.20	16 24 57.09	54 48 14.8
16 45 51.4	8.4	46 47.80	46 37.2	10 9.15	- 7.91	-0 27.86	+12.24	-2.28	- 4.70	16 46 18.97	54 14 39.4
16 47 20.7	7.9	48 18.24	48 13.2	4 24.00	- 3.99	-0 27.80	+ 9.26	-2.21	- 4.30	16 47 49.71	51 20 26.0
17 2 17.1	9.5	3 15.18	2 51.7	52 2.10	-18.65	-0 27.81	+ 9.32	-2.30	- 3.80	17 2 46.51	51 32 35.0
17 3 29.0	9.3	4 26.92	4 8.5	21 21.15	-14.76	-0 27.80	+ 8.88	-2.30	- 3.90	17 3 58.29	51 3 19.5
17 4 43.9	6.8	5 41.94	5 10.7	24 24.10	-25.05	-0 27.81	+ 8.68	-2.31	- 3.90	17 5 13.29	51 0 6.1
17 6 46.3	8.8	7 44.20	7 13.8	1 44.55	-24.22	-0 27.82	+ 9.06	-2.32	- 3.80	17 7 15.50	51 22 47.2
17 7 54.0	6.2	8 49.62	8 25.8	30 18.25	-18.74	-0 27.83	+ 9.65	-2.23	- 3.80	17 8 20.97	51 54 19.6
17 10 49.7	9.0	11 46.10	11 29.2	39 30.60	-13.06	-0 27.84	+10.65	-2.35	- 3.90	17 11 17.26	52 45 14.1
17 12 33.9	8.0	13 31.24	13 25.8	28 16.50	- 4.25	-0 27.83	+ 9.86	-2.34	- 3.70	17 13 2.47	51 56 36.6
17 14 35.3	8.8	15 34.50	15 15.3	25 1.95	-15.75	-0 27.79	+ 7.80	-2.31	- 3.50	17 15 5.91	49 59 37.9
17 17 3.7	9.7	18 1.36	17 42.9	45 35.85	-14.65	-0 27.83	+ 9.48	-2.35	- 3.60	17 17 32.59	51 39 6.9
17 18 53.8	9.0	19 51.32	19 31.7	25 34.60	-15.75	-0 27.82	+ 8.80	-2.34	- 3.50	17 19 22.61	50 59 6.6
17 19 48.6	8.8	20 45.86	20 25.7	44 32.70	-15.99	-0 27.84	+ 9.51	-2.36	- 3.60	17 20 17.07	51 40 9.0
17 22 5.2	8.9	23 2.18	22 29.7	48 22.15	-25.76	-0 27.96	+ 9.27	-2.36	- 3.50	17 22 33.27	51 36 9.8
17 23 44.2	8.2	24 39.82	24 22.5	25 15.05	-13.65	-0 27.85	+ 9.82	-2.37	- 3.50	17 24 10.98	51 59 29.7
17 25 29.2	8.6	26 26.26	25 54.2	26 25.90	-25.80	-0 27.83	+ 8.62	-2.36	- 3.40	17 25 57.51	50 58 5.8
17 25 29.2	8.5	26 26.54	25 55.6	26 25.90	-24.84	-0 27.83	+ 8.62	-2.36	- 3.40	17 25 57.79	50 58 6.8
17 27 2.3	9.0	27 58.62	27 41.6	14 23.80	-13.00	-0 27.89	+11.12	-2.40	- 3.50	17 27 29.63	53 10 23.2
17 28 4.2	7.9	29 1.44	28 44.1	38 27.35	-13.97	-0 27.83	+ 8.61	-2.37	- 3.30	17 28 32.69	50 46 16.5
17 29 14.3	9.2	30 10.86	29 51.6	28 52.10	-15.53	-0 27.84	+ 8.77	-2.37	- 3.30	17 29 42.09	50 55 50.4
17 30 8.6	9.5	31 6.28	30 58.0	30 18.50	- 6.68	-0 27.84	+ 8.79	-2.37	- 3.30	17 30 37.51	50 54 33.0
17 31 43.8	9.2	32 40.38	32 19.9	20 12.30	-16.08	-0 27.86	+ 9.98	-2.39	- 3.30	17 32 11.50	52 4 31.1
17 33 18.9	8.1	34 16.06	33 52.1	21 4.60	-19.25	-0 27.84	+ 8.85	-2.38	- 3.20	17 33 47.27	51 3 34.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	" "	" "	m s	" "	s "	" "	h m s	° ' "
17 34 28.8	9.2	35 27.02	35 1.0	58 4.05	-20.68	-0 27.85	+ 9.20	-2.39	- 3.20	17 34 58.18	51 26 34.3
17 37 18.1	8.3	38 12.54	37 51.8	0 49.90	-15.75	-0 27.90	+11.30	-2.33	- 3.30	17 37 43.59	53 23 55.6
17 37 59.5	8.6	38 56.74	38 46.0	52 55.15	- 8.30	-0 27.85	+ 9.45	-2.40	- 3.10	17 38 27.89	51 31 56.3
17 39 19.5	9.0	40 17.58	39 52.2	43 27.75	-20.10	-0 27.85	+ 9.45	-2.40	- 3.10	17 39 48.72	51 41 12.0
17 41 27.8	9.6	42 25.38	42 15.3	26 36.95	- 7.94	-0 27.86	+ 9.88	-2.41	- 3.10	17 41 56.48	51 58 15.5
17 43 9.4	9.1	44 6.98	43 37.9	58 57.55	-23.16	-0 27.85	+ 9.17	-2.41	- 3.00	17 43 38.12	51 25 39.3
17 45 37.1	5.0	46 34.22	46 5.5	35 55.65	-23.15	-0 27.84	+ 8.51	-2.40	- 2.90	17 46 5.41	50 48 40.8
17 46 52.3	9.2	47 47.30	47 25.4	0 43.45	-17.44	-0 27.86	+ 9.20	-2.41	- 2.90	17 47 18.43	51 23 59.5
17 48 13.8	8.0	49 10.22	48 40.7	15 55.50	-23.62	-0 27.85	+ 8.86	-2.41	- 2.90	17 48 41.37	51 8 41.1
17 50 2.8	8.9	50 59.20	50 36.4	47 46.50	-18.07	-0 27.86	+ 9.44	-2.39	- 3.10	17 50 30.33	51 36 56.2
ZONE 319, JULY 27, 1874.											
17 2 42.5	8.8	3 46.22	3 30.2	20 27.60	-12.83	-0 31.76	+ 8.84	-2.22	- 4.70	17 3 13.71	51 4 12.5
17 4 38.5	8.7	5 38.94	5 3.4	55 41.10	-27.60	-0 31.79	+10.02	-2.24	- 4.80	17 5 6.29	52 28 45.5
17 5 57.7	9.4	6 57.64	6 35.2	31 0.95	-17.25	-0 31.80	+10.64	-2.25	- 4.80	17 6 24.94	52 53 36.7
17 7 8.6	8.5	8 7.10	7 56.3	45 39.65	- 7.98	-0 31.85	+12.59	-2.28	- 4.90	17 7 34.21	54 39 9.3
17 7 11.1	8.8	8 8.96	7 35.3	45 39.65	-24.89	-0 31.85	+12.32	-2.28	- 4.90	17 7 36.07	54 38 52.1
17 7 54.0	7.4	8 53.42	8 43.9	30 26.35	- 7.48	-0 31.79	+ 9.73	-2.24	- 4.70	17 8 20.80	51 54 21.5
17 13 22.0	8.0	14 20.98	13 55.8	29 22.40	-19.39	-0 31.81	+10.64	-2.28	- 4.60	17 13 48.23	52 55 14.0
17 14 32.1	8.1	15 32.70	15 3.6	49 24.40	-22.57	-0 31.80	+10.24	-2.28	- 4.60	17 14 59.98	52 35 8.5
17 15 29.6	8.8	16 28.54	16 20.4	46 54.65	- 6.13	-0 31.83	+11.53	-2.29	- 4.70	17 15 55.71	53 37 56.0
17 17 41.5	8.5	18 44.34	18 31.2	26 28.70	-10.53	-0 31.77	+ 8.78	-2.26	- 4.40	17 18 11.76	50 58 15.3
17 19 3.5	9.0	20 5.84	19 46.7	54 11.85	-15.50	-0 31.76	+ 8.24	-2.26	- 4.30	17 19 33.29	50 30 26.8
17 20 57.0	9.8	21 59.78	21 39.5	10 42.20	-16.41	-0 31.75	+ 7.94	-2.26	- 4.30	17 21 27.26	50 13 55.4
17 22 13.3	6.0	23 11.68	22 46.7	30 32.30	-19.20	-0 31.81	+10.63	-2.30	- 4.50	17 22 38.90	52 54 5.1
17 23 45.1	9.0	24 45.94	24 25.5	19 13.95	-16.00	-0 31.79	+ 9.83	-2.30	- 4.40	17 24 13.23	52 5 26.1
17 24 42.1	8.6	25 41.42	25 28.5	17 39.30	-10.11	-0 31.79	+ 9.92	-2.30	- 4.40	17 25 8.70	52 7 6.8
17 26 8.5	9.0	27 12.38	26 55.4	13 10.50	-13.60	-0 31.78	+ 8.98	-2.29	- 4.20	17 26 39.74	51 11 31.5
17 27 21.4	8.6	28 23.78	28 8.0	14 56.65	-12.92	-0 31.76	+ 7.93	-2.28	- 4.10	17 27 51.22	50 9 45.2
17 28 29.7	6.9	29 27.36	29 8.4	58 0.50	-14.10	-0 31.87	+12.35	-2.34	- 4.50	17 28 54.37	54 26 44.3
17 28 52.0	8.4	29 48.74	30 10.0	58 0.50	+15.81	-0 31.87	+12.33	-2.34	- 4.50	17 29 15.75	54 27 14.2
17 29 44.8	8.8	30 43.30	30 34.7	6 9.20	- 6.40	-0 31.85	+12.28	-2.35	- 4.40	17 30 10.33	54 18 43.4
17 31 27.1	9.0	32 26.10	32 4.5	37 29.25	-16.68	-0 31.82	+10.56	-2.33	- 4.30	17 31 53.27	52 47 11.6
17 31 57.7	9.0	32 59.66	33 34.8	10 56.85	+27.46	-0 31.80	+ 9.70	-2.32	- 4.20	17 32 26.90	52 14 27.5
17 33 18.9	7.8	34 19.92	34 5.6	21 9.30	-11.47	-0 31.78	+ 8.88	-2.31	- 4.10	17 33 47.26	51 3 35.5
17 34 28.8	9.0	35 30.92	35 9.3	58 4.30	-17.18	-0 31.79	+ 9.20	-2.32	- 4.10	17 34 58.21	51 26 35.2
17 35 38.0	8.6	36 35.93	36 14.8	37 46.15	-16.66	-0 31.80	+ 9.52	-2.33	- 4.10	17 36 3.18	51 46 54.3
ZONE 320, JULY 28, 1874.											
17 2 42.5	8.8	3 47.32	3 38.1	20 32.95	- 7.38	-0 32.77	+ 8.88	-2.21	- 4.90	17 3 13.81	51 4 12.4
17 4 38.5	8.4	5 39.90	5 9.6	55 44.30	-23.55	-0 32.81	+10.10	-2.22	- 5.00	17 5 6.25	52 28 46.1
17 5 57.7	9.2	6 58.76	6 30.7	30 56.05	-21.64	-0 32.82	+10.55	-2.23	- 5.00	17 6 25.06	52 53 36.8
17 7 8.6	8.4	8 8.18	7 44.2	45 30.90	-17.72	-0 32.87	+12.46	-2.26	- 5.10	17 7 34.29	54 39 7.8
17 7 11.1	8.8	8 9.98	7 24.2	45 30.90	-33.82	-0 32.87	+12.06	-2.26	- 5.10	17 7 36.09	54 38 51.3
17 7 54.0	6.7	8 54.42	8 37.9	30 21.75	-12.99	-0 32.80	+ 9.66	-2.22	- 5.00	17 8 20.81	51 54 19.1
17 11 5.1	9.2	12 10.48	11 33.3	55 4.00	-30.22	-0 32.77	+ 7.91	-2.22	- 4.70	17 11 36.98	50 29 18.4
17 13 22.0	6.9	14 22.04	13 49.8	29 17.35	-24.77	-0 32.82	+10.52	-2.26	- 4.80	17 13 48.30	52 55 13.2
17 14 32.1	8.0	15 33.76	15 7.7	49 28.15	-20.24	-0 32.81	+10.27	-2.26	- 4.80	17 15 0.05	52 35 6.8
17 15 29.6	8.7	16 29.52	16 4.1	46 41.40	-19.22	-0 32.85	+11.38	-2.27	- 4.90	17 15 55.69	53 37 55.7
17 17 41.5	8.6	18 45.34	18 28.6	26 26.95	-13.43	-0 32.79	+ 8.74	-2.24	- 4.60	17 18 11.76	50 58 13.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
17 19 3.5	9.3	20 7.06	19 59.0	54 22.05	- 6.57	-0 32.78	+ 8.31	-2.24	- 4.50	17 19 33.51	50 30 25.3
17 20 57.0	9.8	22 0.82	21 30.7	10 34.40	-24.58	-0 32.77	+ 7.80	-2.24	- 4.50	17 21 27.30	50 13 54.6
17 22 13.3	6.9	23 12.64	22 51.1	30 35.35	-16.55	-0 32.83	+ 10.66	-2.28	- 4.70	17 22 38.86	52 54 4.4
17 23 45.1	9.0	24 47.04	24 20.1	19 10.70	-21.09	-0 32.81	+ 9.73	-2.28	- 4.60	17 24 13.33	52 5 23.9
17 24 42.1	8.7	25 42.40	25 27.4	17 37 85	-11.76	-0 32.81	+ 9.90	-2.28	- 4.60	17 25 8.68	52 7 6.3
17 26 8.5	9.3	27 13.40	26 48.7	13 5.30	-19.91	-0 32.79	+ 8.88	-2.27	- 4.40	17 26 39.77	51 11 30.0
17 27 21.4	8.4	28 24.76	28 7.8	14 56.00	-13.90	-0 32.78	+ 7.91	-2.26	- 4.30	17 27 51.20	50 9 44.5
17 28 29.7	7.0	29 28.22	29 15.4	58 5.00	- 9.50	-0 32.88	+ 12.37	-2.32	- 4.70	17 28 54.24	54 26 44.1
17 28 52.0	8.1	29 49.80	30 16.2	58 5.00	+19.59	-0 32.88	+ 12.24	-2.32	- 4.70	17 29 15.82	54 27 13.1
17 29 44.8	9.0	30 44.20	31 22.7	6 42.70	+28.68	-0 32.87	+ 11.90	-2.33	- 4.60	17 30 10.23	54 18 44.3
17 31 27.1	9.0	32 27.08	32 11.6	37 34.35	-11.97	-0 32.84	+ 10.61	-2.31	- 4.50	17 31 53.25	52 47 11.0
17 33 18.9	7.8	34 20.82	33 58.5	21 3.80	-17.89	-0 32.80	+ 8.78	-2.29	- 4.30	17 33 47.16	51 3 34.1
17 34 28.8	9.0	35 31.80	35 8.6	58 4.65	-18.45	-0 32.81	+ 9.17	-2.30	- 4.30	17 34 58.09	51 26 33.2
17 35 38.0	8.5	36 36.98	36 14.8	37 46.45	-17.55	-0 32.82	+ 9.50	-2.31	- 4.30	17 36 3.23	51 46 52.8
17 36 58.5	8.8	37 57.12	37 30.4	58 19.70	-19.82	-0 32.88	+ 12.21	-2.37	- 4.30	17 37 23.08	54 26 20.0
17 37 43.9	9.2	38 46.42	38 30.2	59 34.40	-12.32	-0 32.86	+ 11.27	-2.33	- 4.40	17 38 12.51	53 25 11.9
17 39 14.8	...	40 15.98	39 47.0	5 10.20	-23.13	-0 32.82	+ 8.95	-2.31	- 4.20	17 39 42.26	51 19 23.3
ZONE 321, JULY 30, 1874.											
17 2 38.2	8.8	3 42.18	3 20.8	54 50.80	-15.86	-0 34.94	+ 12.36	-2.19	- 5.60	17 3 6.30	54 29 49.2
17 4 38.5	8.3	5 42.06	5 28.5	55 58.95	-10.57	-0 34.88	+ 10.30	-2.17	- 5.40	17 5 6.39	52 28 44.7
17 5 57.7	9.1	7 0.96	6 46.7	31 7.40	-11.01	-0 34.90	+ 10.75	-2.18	- 5.40	17 6 25.23	52 53 36.3
17 7 13.0	9.0	8 14.44	7 49.6	12 25.35	-18.52	-0 34.94	+ 12.00	-2.20	- 5.50	17 7 38.57	54 12 12.1
17 11 5.1	9.3	12 12.36	12 5.0	55 28.75	- 6.01	-0 34.85	+ 9.30	-2.17	- 5.00	17 11 36.83	50 29 19.4
17 16 32.5	7.8	17 34.94	17 15.4	24 11.45	-15.32	-0 34.88	+ 9.76	-2.21	- 5.10	17 16 59.24	52 0 27.2
17 17 42.7	8.8	18 48.14	18 23.2	31 26.00	-20.01	-0 34.85	+ 7.63	-2.20	- 5.00	17 18 12.60	49 53 8.0
17 18 36.9	9.2	19 42.22	19 22.3	52 27.60	-15.44	-0 34.88	+ 9.27	-2.21	- 5.00	17 19 6.55	51 32 11.7
17 19 48.6	8.3	20 52.72	20 33.7	44 30.95	-15.04	-0 34.89	+ 9.42	-2.21	- 5.10	17 20 17.03	51 40 8.9
17 21 46.7	9.0	22 51.62	22 26.8	14 12.85	-19.84	-0 34.87	+ 8.85	-2.22	- 5.00	17 22 15.96	51 10 21.9
17 23 48.0	8.0	24 53.72	24 39.3	33 47.40	-11.85	-0 34.85	+ 7.76	-2.21	- 4.90	17 24 18.17	49 50 54.6
17 25 30.1	7.2	26 36.12	26 11.9	13 25.65	-19.78	-0 34.86	+ 7.85	-2.22	- 4.80	17 26 0.53	50 11 8.7
17 26 33.0	9.0	27 33.32	27 20.1	39 45.30	- 9.72	-0 34.97	+ 12.70	-2.27	- 5.20	17 26 57.28	54 45 3.6
17 27 16.5	8.6	28 18.72	27 55.6	9 48.45	-17.64	-0 34.93	+ 11.03	-2.26	- 5.00	17 27 42.83	53 14 51.2
17 29 14.3	8.0	30 17.52	30 6.2	13 51.95	- 8.84	-0 34.89	+ 10.07	-2.25	- 4.90	17 29 41.74	52 10 55.8
17 31 57.7	8.6	33 2.72	32 47.4	10 18.15	-11.96	-0 34.90	+ 10.09	-2.26	- 4.90	17 32 26.92	52 14 26.7
17 36 11.1	6.4	37 16.46	36 49.3	33 49.00	-22.39	-0 34.85	+ 7.62	-2.26	- 4.70	17 36 40.85	49 50 43.5
17 37 20.3	9.1	38 24.22	38 9.4	43 50.85	-11.71	-0 34.90	+ 9.48	-2.27	- 4.80	17 37 48.44	51 40 54.2
17 39 19.5	8.6	40 24.46	40 7.9	43 31.70	-13.14	-0 34.90	+ 9.46	-2.26	- 4.70	17 39 48.69	51 41 12.2
17 40 56.3	8.1	41 59.82	41 38.7	34 16.40	-16.64	-0 34.90	+ 9.58	-2.29	- 4.70	17 41 24.01	51 50 24.3
17 41 51.6	8.5	42 54.92	42 32.1	24 48.50	-17.92	-0 34.90	+ 9.72	-2.29	- 4.70	17 42 19.10	51 59 51.1
17 43 10.8	8.8	44 11.82	43 50.6	25 2.80	-15.91	-0 34.96	+ 11.87	-2.31	- 4.80	17 43 35.79	53 59 41.0
17 45 9.2	9.0	46 13.38	46 0.3	39 20.40	-10.35	-0 34.90	+ 9.57	-2.28	- 4.60	17 45 37.58	51 45 27.0
17 48 6.8	8.4	49 15.18	48 50.3	29 49.90	-20.47	-0 34.86	+ 7.66	-2.29	- 4.50	17 48 39.51	49 54 45.8
17 49 16.8	8.3	50 15.06	50 0.1	20 7.40	-10.96	-0 34.98	+ 13.04	-2.35	- 4.80	17 49 38.89	55 4 43.0
17 50 45.1	9.8	51 48.14	51 43.7	51 44.20	- 3.49	-0 34.89	+ 9.42	-2.31	- 4.50	17 51 16.50	51 33 8.2
17 51 49.5	8.1	52 53.16	52 27.5	53 39.85	-20.41	-0 34.89	+ 9.25	-2.30	- 4.50	17 52 17.36	51 30 57.9
17 53 59.8	8.8	55 3.66	54 33.1	12 31.50	-24.55	-0 34.90	+ 8.82	-2.31	- 4.50	17 54 27.86	51 12 1.8
17 54 51.5	9.3	55 57.76	55 41.4	13 15.85	-13.12	-0 34.90	+ 9.00	-2.31	- 4.40	17 55 21.96	51 11 29.4
17 56 47.6	8.8	57 47.68	57 19.3	22 8.00	-20.62	-0 34.99	+ 12.87	-2.37	- 4.60	17 57 11.48	55 2 33.4
17 58 34.2	8.5	59 32.92	59 2.5	19 0.70	-22.20	-0 34.99	+ 12.89	-2.38	- 4.60	17 58 56.71	55 5 39.4
18 4 23.1	8.9	5 24.22	5 4.0	17 9.25	-15.11	-0 34.97	+ 12.04	-2.38	- 4.40	18 4 48.09	54 7 37.8

ZONE 322, AUGUST 2, 1874.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
17 2 38.2	8.9	3 45.58	3 25.4	54 52.85	-14.97	-0 38.39	+12.42	-2.11	- 6.10	17 3 6.33	54 29 47.5
17 4 38.5	8.8	5 45.38	5 22.9	55 51.15	-17.49	-0 38.33	+10.26	-2.10	- 5.90	17 5 6.33	52 28 44.9
17 5 57.7	9.2	7 42.4	6 40.9	31 0.00	-17.94	-0 38.35	+10.70	-2.11	- 5.80	17 6 25.13	52 53 36.2
17 7 13.0	8.9	8 17.82	7 57.6	12 27.55	-15.08	-0 38.39	+12.11	-2.12	- 6.00	17 7 38.58	54 12 12.9
17 11 5.1	9.1	12 15.84	11 53.4	55 13.80	-18.19	-0 38.30	+ 9.22	-2.11	- 5.60	17 11 36.92	50 29 21.4
17 14 32.1	7.8	15 39.06	15 23.5	49 34.90	-12.10	-0 38.34	+10.44	-2.14	- 5.70	17 14 59.94	52 35 7.8
17 15 29.6	8.2	16 34.90	16 22.6	46 50.05	- 9.31	-0 38.38	+11.58	-2.16	- 5.80	17 15 55.65	53 37 56.5
17 16 32.5	7.5	17 38.24	17 20.0	24 10.95	-14.30	-0 38.33	+ 9.82	-2.14	- 5.60	17 16 59.16	52 0 29.2
17 17 42.7	8.8	18 51.46	18 31.3	31 29.15	-16.61	-0 38.29	+ 7.72	-2.14	- 5.50	17 18 12.54	49 53 6.8
17 18 36.9	9.2	19 45.60	19 30.2	52 32.10	-12.23	-0 38.32	+ 9.36	-2.14	- 5.50	17 19 6.56	51 32 9.9
17 19 48.6	8.5	20 56.10	20 36.0	44 28.90	-15.91	-0 38.34	+ 9.45	-2.15	- 5.60	17 20 17.02	51 40 9.5
17 21 46.7	9.0	22 54.94	22 28.2	14 10.50	-21.36	-0 38.32	+ 8.87	-2.15	- 5.50	17 22 15.90	51 10 22.2
17 23 48.0	8.5	24 57.08	24 36.6	33 41.80	-16.87	-0 38.30	+ 7.73	-2.16	- 5.30	17 24 18.13	49 50 54.6
17 25 30.1	6.9	26 39.60	26 20.8	13 29.65	-15.37	-0 38.31	+ 7.94	-2.15	- 5.40	17 26 0.63	50 11 8.5
17 26 33.0	9.0	27 36.72	27 10.4	39 35.50	-19.38	-0 38.42	+12.63	-2.20	- 5.80	17 26 57.30	54 45 3.0
17 27 16.5	8.4	28 22.18	28 5.0	9 53.15	-13.14	-0 38.38	+11.14	-2.19	- 5.60	17 27 42.91	53 14 50.8
17 29 14.3	7.5	30 20.84	30 3.0	13 46.95	-13.93	-0 38.34	+10.05	-2.18	- 5.50	17 29 41.68	52 10 55.0
17 31 57.7	9.0	33 6.04	32 44.6	10 12.00	-16.72	-0 38.35	+10.07	-2.19	- 5.60	17 32 26.86	52 14 27.3
17 33 39.5	9.1	34 42.66	34 25.3	21 54.60	-12.71	-0 38.43	+13.04	-2.23	- 5.10	17 34 3.17	55 2 52.3
17 35 28.4	9.1	36 36.04	36 19.5	25 21.05	-13.54	-0 38.31	+ 7.78	-2.19	- 4.40	17 35 57.03	49 59 20.6
17 37 20.3	8.9	38 27.72	38 10.7	43 49.25	-13.45	-0 38.35	+ 9.50	-2.21	- 5.40	17 37 48.55	51 40 53.4
17 39 19.5	8.4	40 27.84	39 58.3	43 21.00	-23.35	-0 38.35	+ 9.36	-2.20	- 5.30	17 39 48.68	51 41 11.9
17 40 56.3	8.0	42 3.34	41 46.9	34 19.00	-12.93	-0 38.35	+ 9.67	-2.22	- 5.30	17 41 24.15	51 50 24.8
17 41 51.6	8.5	42 58.36	43 31.7	25 32.95	+26.18	-0 38.35	+ 9.61	-2.22	- 5.30	17 42 19.16	51 59 49.9
17 43 10.8	8.5	44 15.04	44 3.6	25 7.60	- 8.55	-0 38.41	+11.98	-2.25	- 5.50	17 43 35.62	53 59 42.8
17 45 9.2	8.7	46 16.78	46 2.1	39 18.40	-11.78	-0 38.35	+ 9.59	-2.23	- 5.30	17 45 37.58	51 45 26.8
17 48 6.8	8.5	49 18.72	48 58.7	29 53.35	-16.44	-0 38.31	+ 7.74	-2.23	- 5.20	17 48 39.66	49 54 45.7
17 49 16.8	8.5	50 18.46	49 46.0	19 54.60	-23.74	-0 38.44	+13.02	-2.28	- 5.40	17 49 38.90	55 4 42.3
17 50 45.1	9.8	51 51.66	51 39.0	51 35.55	-10.08	-0 38.35	+ 9.41	-2.25	- 5.20	17 51 16.62	51 33 9.4
17 51 49.5	7.5	52 56.58	52 41.3	53 47.30	-12.15	-0 38.35	+ 9.40	-2.24	- 5.20	17 52 17.38	51 30 58.0
17 53 59.8	8.8	55 7.18	54 41.9	12 35.10	-20.24	-0 38.35	+ 8.94	-2.25	- 5.10	17 54 27.99	51 12 2.0
17 54 51.5	9.4	56 1.06	55 41.4	13 11.65	-15.76	-0 38.35	+ 8.99	-2.26	- 5.10	17 55 21.86	51 11 30.1
17 56 47.6	9.0	57 51.08	57 25.0	22 9.35	-19.08	-0 38.44	+12.94	-2.30	- 5.30	17 57 11.50	55 2 32.9
17 58 34.2	8.7	59 36.24	59 8.5	19 0.35	-20.23	-0 38.44	+12.96	-2.31	- 5.30	17 58 56.65	55 5 40.9
18 2 33.3	...	3 35.86	3 21.4	19 13.55	-10.59	-0 38.43	+13.10	-2.32	- 5.20	18 2 56.27	55 5 38.0
18 4 23.1	8.9	5 27.60	5 6.8	17 5.45	-15.56	-0 38.43	+12.06	-2.32	- 5.10	18 4 48.07	54 7 40.3

ZONE 323, AUGUST 6, 1874.

17 22 6.6	9.0	22 18.98	22 3.9	30 51.15	-12.42	+0 18.84	+ 7.94	-2.05	- 6.20	17 22 37.28	49 53 49.1
17 24 17.9	8.8	24 29.44	24 2.2	43 49.65	-22.00	+0 18.82	+ 8.54	-2.06	- 6.20	17 24 47.66	50 40 41.8
17 25 38.1	9.5	25 46.78	25 34.5	5 2.20	- 9.38	+0 18.76	+11.48	-2.07	- 6.40	17 26 4.77	53 19 44.7
17 27 2.3	8.9	27 11.66	26 43.7	14 11.75	-21.42	+0 18.77	+11.14	-2.09	- 6.40	17 27 29.64	53 10 22.9
17 28 4.2	7.8	28 14.60	28 1.9	38 28.10	-10.02	+0 18.82	+ 8.76	-2.08	- 6.10	17 28 32.79	50 46 16.0
17 29 14.3	9.0	29 23.96	29 8.2	28 50.80	-12.71	+0 18.82	+ 8.92	-2.08	- 6.10	17 29 42.14	50 55 50.8
17 31 43.8	9.0	31 53.62	31 32.4	20 8.25	-16.63	+0 18.79	+10.05	-2.10	- 6.20	17 32 11.68	52 4 30.7
17 33 35.5	9.5	33 45.84	33 25.2	10 2.45	-16.46	+0 18.82	+ 9.20	-2.10	- 6.10	17 34 3.98	51 14 36.1
17 34 58.1	9.3	35 7.64	34 45.1	44 3.20	-17.41	+0 18.78	+10.69	-2.11	- 6.20	17 35 25.64	52 40 35.9
17 37 25.8	9.4	37 37.90	37 19.9	21 0.25	-14.75	+0 18.83	+ 7.97	-2.11	- 6.00	17 37 56.10	50 3 39.2
17 38 52.8	8.9	39 3.34	38 45.2	25 40.05	-14.55	+0 18.82	+ 8.96	-2.12	- 6.10	17 39 21.47	50 59 0.6
17 40 57.4	9.0	41 9.92	40 46.3	21 52.60	-19.34	+0 18.84	+ 7.90	-2.16	- 6.00	17 41 28.08	50 2 42.5

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
17 42 18.3	8.2	42 29.64	42 4.9	10 38.35	-20.17	+0 18.83	+ 8.08	-2.12	- 6.00	17 42 47.82	50 13 56.2
17 43 9.4	9.4	43 20.22	43 7.4	59 6.20	-10.18	+0 18.80	+ 9.47	-2.13	- 6.10	17 43 38.29	51 25 39.7
17 44 13.5	8.8	44 21.08	45 1.7	45 20.00	+30.71	+0 18.76	+11.45	-2.15	- 6.30	17 44 38.95	53 40 8.7
17 47 11.4	8.8	47 18.00	47 50.8	45 10.50	+24.21	+0 18.73	+12.67	-2.17	- 6.30	17 47 35.75	54 40 13.2
ZONE 324, AUGUST 10, 1874.											
17 28 4.2	7.8	28 17.80	27 50.8	38 15.75	-21.79	+0 15.40	+ 8.39	-1.94	- 6.80	17 28 32.71	50 46 14.9
17 29 14.3	9.0	29 27.08	29 10.4	28 48.70	-13.43	+0 15.40	+ 8.66	-1.98	- 6.80	17 29 41.94	50 55 50.7
17 31 43.8	9.0	31 56.66	31 31.5	20 2.95	-19.77	+0 15.38	+ 9.71	-2.00	- 6.90	17 32 11.41	52 4 31.3
17 33 35.5	9.5	33 49.20	33 27.5	9 59.60	-17.34	+0 15.39	+ 8.93	-2.00	- 6.80	17 34 4.01	51 14 36.5
17 34 58.1	9.0	35 10.88	34 47.3	44 1.25	-18.26	+0 15.36	+10.39	-2.01	- 6.90	17 35 25.56	52 40 35.4
17 37 25.8	9.2	37 41.12	37 15.3	20 53.85	-21.15	+0 15.42	+ 7.66	-2.02	- 6.70	17 37 56.00	50 3 37.6
17 38 52.8	8.8	39 6.68	38 43.5	25 35.00	-18.64	+0 15.40	+ 8.68	-2.02	- 6.80	17 39 21.49	50 59 0.0
17 40 57.4	9.4	41 13.12	40 46.1	21 48.20	-22.13	+0 15.42	+ 7.62	-2.03	- 6.70	17 41 27.99	50 2 42.6
17 41 22.1	7.5	41 35.58	.....	.....	.....	+0 15.41	.....	-2.03	.....	17 41 50.45	.....
17 42 18.3	8.4	42 32.92	42 19.7	10 46.70	-10.78	+0 15.41	+ 8.01	-2.03	- 6.70	17 42 47.77	50 13 55.9
17 43 9.4	9.3	43 23.34	43 41.3	59 29.15	+14.32	+0 15.39	+ 9.18	-2.04	- 6.80	17 43 38.09	51 25 39.7
17 44 13.5	8.7	44 24.58	44 11.7	44 37.85	- 9.75	+0 15.33	+11.53	-2.05	- 7.00	17 44 39.12	53 40 9.2
17 45 40.7	9.3	45 56.84	45 32.7	53 18.00	-19.14	+0 15.39	+ 9.19	-2.05	- 6.80	17 46 11.57	51 31 17.6
17 47 11.4	9.0	47 21.28	46 51.6	44 23.45	-21.94	+0 15.31	+12.36	-2.07	- 7.10	17 47 35.71	54 40 12.4
17 48 46.3	9.5	48 59.68	48 24.9	52 18.80	-27.62	+0 15.39	+ 9.02	-2.06	- 6.80	17 49 14.40	51 32 8.5
17 50 13.9	9.2	50 29.86	50 7.9	26 55.05	-17.30	+0 15.38	+ 9.66	-2.07	- 6.80	17 50 44.53	51 57 43.3
17 51 49.5	8.4	52 2.70	51 31.0	53 33.25	-25.18	+0 15.39	+ 9.07	-2.07	- 6.80	17 52 17.41	51 30 56.8
17 52 51.4	8.8	53 6.98	52 38.8	38 26.80	-22.77	+0 15.40	+ 8.31	-2.07	- 6.70	17 53 21.74	50 46 5.1
ZONE 325, AUGUST 22, 1874.											
17 31 43.8	9.2	32 6.86	31 36.8	19 57.05	-23.61	+0 4.88	+ 9.89	-1.66	- 8.60	17 32 11.45	52 4 31.2
17 33 35.5	9.6	33 59.34	33 32.5	9 52.80	-21.41	+0 4.90	+ 9.05	-1.67	- 8.60	17 34 3.99	51 14 36.9
17 34 58.1	9.0	35 21.08	34 52.2	43 54.75	-22.36	+0 4.86	+10.56	-1.67	- 8.70	17 35 25.60	52 40 35.6
17 37 25.8	9.0	37 51.34	37 30.7	20 54.00	-16.88	+0 4.91	+ 7.87	-1.70	- 8.50	17 37 56.03	50 3 39.5
17 38 52.8	9.0	39 16.90	38 46.9	25 28.10	-24.11	+0 4.89	+ 8.74	-1.70	- 8.60	17 39 21.52	50 58 59.1
17 42 18.3	8.2	42 43.22	42 15.2	10 30.25	-22.86	+0 4.91	+ 7.97	-1.72	- 8.50	17 42 47.88	50 13 57.8
17 43 9.4	9.2	43 33.70	43 22.6	59 3.85	- 8.83	+0 4.88	+ 9.43	-1.72	- 8.70	17 43 38.26	51 25 39.6
17 45 40.7	9.0	46 7.02	45 40.9	53 13.25	-20.72	+0 4.88	+ 9.35	-1.72	- 8.70	17 46 11.57	51 31 18.4
17 47 11.4	8.9	47 31.36	47 6.8	44 23.55	-18.16	+0 4.81	+12.70	-1.71	- 9.00	17 47 35.65	54 40 13.8
17 48 46.3	9.3	49 9.96	48 40.4	52 19.75	-23.49	+0 4.88	+ 9.32	-1.73	- 8.70	17 49 14.50	51 32 9.4
17 50 13.9	9.1	50 40.14	50 18.3	26 52.00	-17.14	+0 4.87	+ 9.90	-1.75	- 8.80	17 50 44.62	51 57 44.1
17 51 49.5	8.3	52 12.90	51 43.2	53 31.55	-23.59	+0 4.88	+ 9.30	-1.75	- 8.80	17 52 17.42	51 30 57.6
17 52 51.4	9.0	53 17.34	52 50.5	38 25.40	-21.64	+0 4.89	+ 8.57	-1.76	- 8.70	17 53 21.90	50 46 5.2
17 54 50.4	7.0	55 12.22	54 42.5	10 44.80	-23.23	+0 4.87	+10.07	-1.76	- 8.80	17 55 16.68	52 13 45.8
17 55 53.2	8.2	56 14.82	55 58.1	29 23.65	-13.15	+0 4.86	+ 9.89	-1.77	- 8.90	17 56 19.28	51 55 16.8
17 56 50.3	9.0	57 12.60	56 45.1	44 13.05	-21.28	+0 4.85	+10.59	-1.76	- 8.90	17 57 17.01	52 40 20.1
17 57 37.5	9.0	58 3.08	57 51.9	8 42.95	- 8.94	+0 4.88	+ 9.25	-1.78	- 8.80	17 58 7.59	51 16 1.4
17 58 52.4	8.4	59 18.08	58 54.0	57 17.45	-19.17	+0 4.87	+ 9.31	-1.78	- 8.80	17 59 22.56	51 27 16.8
17 59 52.2	8.4	0 15.52	0 0.8	48 49.20	-11.40	+0 4.85	+10.65	-1.78	- 8.90	18 0 19.91	52 35 54.1

ZONE 326, AUGUST 23, 1874.													
R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.			Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.	
						R. A.	Dec.		R. A.	Dec.			
h m s		m s	m s	' "	"	m s	"	"	s "	"	h m s	' "	"
18 6 15.8	8.8	6 40.94	6 20.6	33 43.25	-16.01	+0 4.35	+ 9.80	-1.79	- 9.00		18 6 44.87	51 50 55.4	
18 7 25.5	8.9	7 51.38	7 33.1	55 50.90	-14.63	+0 4.36	+ 9.44	-1.79	- 9.00		18 7 55.34	51 28 48.9	
18 8 41.2	7.5	9 3.28	8 35.7	7 34.95	-20.77	+0 4.35	+10.19	-1.79	- 9.10		18 9 7.18	52 16 59.4	
18 10 4.4	8.8	10 26.94	10 4.9	44 33.75	-17.03	+0 4.34	+10.66	-1.80	- 9.20		18 10 30.80	52 40 4.9	
18 10 49.4	9.4	11 13.72	11 6.5	57 24.80	- 5.73	+0 4.36	+ 9.47	-1.81	- 9.10		18 11 17.67	51 27 24.1	
18 11 55.2	9.2	12 19.72	12 0.0	15 56.00	-15.77	+0 4.37	+ 9.06	-1.82	- 9.10		18 12 23.69	51 8 42.5	
18 12 48.7	8.8	13 13.44	12 53.6	7 27.20	-15.81	+0 4.36	+ 9.20	-1.82	- 9.10		18 13 17.39	51 17 11.5	
18 13 44.8	8.7	14 10.28	13 51.8	59 53.20	-14.73	+0 4.36	+ 9.37	-1.82	- 9.10		18 14 14.22	51 24 46.8	
18 15 9.4	8.6	15 32.34	15 5.8	54 50.95	-21.06	+0 4.36	+ 9.36	-1.83	- 9.10		18 15 36.27	51 29 42.9	
18 15 27.1	9.3	15 51.24	15 51.0	56 37.30	- 0.16	+0 4.36	+ 9.54	-1.83	- 9.10		18 15 55.17	51 28 17.6	
18 16 59.9	9.3	17 23.68	17 8.1	52 20.55	-12.38	+0 4.36	+ 9.51	-1.84	- 9.10		18 17 27.59	51 32 22.3	
18 18 6.4	6.1	18 29.04	18 7.8	10 10.80	-16.94	+0 4.37	+ 9.15	-1.84	- 9.10		18 18 32.98	51 14 27.2	
18 18 49.8	7.0	19 12.92	.....	.....	.....	+0 4.36	.....	-1.84	.....		18 19 16.84	.....	
18 19 44.4	9.0	20 8.92	19 43.7	58 16.50	-20.05	+0 4.36	+ 9.45	-1.85	- 9.10		18 20 12.83	51 26 18.8	
18 20 52.1	8.0	21 18.42	20 53.4	56 47.70	-19.88	+0 4.36	+ 9.35	-1.86	- 9.20		18 21 22.32	51 27 47.7	
18 22 54.4	8.3	23 18.36	22 53.0	27 58.95	-19.98	+0 4.35	+ 9.85	-1.86	- 9.20		18 23 22.22	51 56 37.0	
18 24 10.6	8.3	24 34.26	24 6.1	51 35.90	-22.38	+0 4.36	+ 9.39	-1.87	- 9.20		18 24 38.15	51 32 57.3	
18 25 22.5	7.3	25 46.02	25 11.7	32 40.05	-27.03	+0 4.35	+ 9.63	-1.87	- 9.20		18 25 49.88	51 51 48.9	
18 27 11.1	8.8	27 35.02	27 4.3	5 57.45	-23.39	+0 4.36	+ 9.09	-1.88	- 9.20		18 27 38.92	51 18 34.7	
18 28 16.8	9.1	28 39.00	28 21.6	24 38.80	-13.37	+0 4.33	+11.09	-1.88	- 9.20		18 28 42.76	53 0 5.5	
18 32 2.8	8.5	32 27.44	31 55.3	17 40.90	-25.72	+0 4.38	+ 8.88	-1.91	- 9.20		18 32 31.34	51 6 49.2	
18 33 9.1	7.5	33 32.16	33 13.0	38 30.25	-15.17	+0 4.36	+ 9.66	-1.91	- 9.30		18 33 36.00	51 46 11.1	
18 34 19.2	7.2	34 43.42	34 17.4	34 25.45	-20.51	+0 4.36	+ 9.74	-1.91	- 9.30		18 34 47.26	51 50 10.8	
18 35 44.8	8.8	36 10.90	35 42.0	16 3.90	-23.64	+0 4.40	+ 7.87	-1.93	- 9.20		18 36 14.86	50 8 27.6	
18 37 37.9	7.2	38 3.62	37 38.6	48 59.90	-20.25	+0 4.39	+ 8.44	-1.93	- 9.20		18 38 7.55	50 35 35.7	
18 40 8.8	9.0	40 33.92	40 22.9	8 7.75	- 8.78	+0 4.37	+ 9.29	-1.94	- 9.30		18 40 37.78	51 16 40.3	
18 41 22.7	8.7	41 47.10	41 23.9	31 59.05	-18.28	+0 4.36	+ 9.84	-1.95	- 9.30		18 41 50.91	51 52 40.1	
18 43 5.2	9.4	43 26.68	43 0.8	56 40.60	-20.14	+0 4.35	+10.42	-1.95	- 9.30		18 43 30.44	52 27 57.4	
18 44 4.3	8.0	44 25.76	44 11.3	43 21.45	-10.96	+0 4.32	+11.83	-1.96	- 9.40		18 44 29.41	53 41 27.2	
18 45 20.5	9.2	45 45.66	45 17.7	43 57.80	-22.65	+0 4.38	+ 8.47	-1.97	- 9.30		18 45 49.54	50 40 36.0	
18 48 18.9	8.8	48 45.04	48 24.3	35 43.50	-16.69	+0 4.38	+ 8.72	-1.98	- 9.30		18 48 48.91	50 48 56.7	
18 49 19.6	9.0	49 44.50	49 21.8	58 34.40	-18.06	+0 4.37	+ 9.35	-1.98	- 9.30		18 49 48.32	51 26 5.2	
18 50 22.2	9.6	50 47.38	50 30.5	53 28.35	-13.42	+0 4.37	+ 9.50	-1.99	- 9.30		18 50 51.19	51 31 16.1	
18 51 23.1	7.2	51 47.52	51 35.2	16 7.10	- 9.85	+0 4.38	+ 9.15	-1.99	- 9.30		18 51 51.37	51 8 40.7	
18 52 27.1	9.3	52 50.86	52 35.9	54 18.20	-11.65	+0 4.35	+ 8.45	-2.00	- 9.30		18 52 54.59	52 30 27.2	
18 53 37.0	7.8	54 1.32	53 43.4	51 30.15	-14.21	+0 4.37	+ 9.52	-2.00	- 9.30		18 54 5.13	51 33 13.8	
18 55 5.8	9.4	55 31.56	55 7.8	9 4.10	-19.01	+0 4.38	+ 9.16	-2.01	- 9.30		18 55 35.39	51 15 34.7	
18 56 38.2	8.8	57 3.60	56 34.9	0 49.80	-22.85	+0 4.37	+ 9.25	-2.01	- 9.40		18 57 7.41	51 23 45.4	
18 57 41.0	9.0	58 6.32	57 48.8	22 19.65	-14.04	+0 4.38	+ 8.99	-2.02	- 9.40		18 58 10.15	51 2 24.2	
18 59 27.6	8.6	59 52.94	59 30.4	0 27.20	-17.84	+0 4.38	+ 9.34	-2.03	- 9.40		18 59 56.74	51 24 13.4	
19 0 28.6	9.0	0 53.94	0 36.8	46 1.60	-13.54	+0 4.37	+ 9.65	-2.03	- 9.40		19 0 57.72	51 38 43.7	
19 4 48.3	8.0	5 15.00	4 54.1	21 19.70	-17.12	+0 4.40	+ 7.89	-2.05	- 9.30		19 5 18.89	50 3 20.7	
19 6 16.4	9.0	6 43.60	6 19.2	35 56.00	-19.19	+0 4.38	+ 8.68	-2.06	- 9.40		19 6 47.42	50 48 43.1	
19 7 17.2	8.7	7 43.50	7 16.9	6 31.90	-21.62	+0 4.36	+ 8.20	-2.05	- 9.30		19 7 47.34	50 18 4.5	
19 8 22.7	8.2	8 47.32	8 20.0	59 3.50	-21.25	+0 4.35	+10.37	-2.06	- 9.50		19 8 51.02	52 25 35.3	
ZONE 327, AUGUST 24, 1874.													
18 8 41.2	7.8	9 3.82	8 40.6	7 38.50	-18.12	+0 3.84	+10.27	-1.77	- 9.30		18 9 7.23	52 16 58.4	
18 10 4.4	9.0	10 27.50	9 58.1	44 29.65	-22.76	+0 3.83	+10.60	-1.77	- 9.30		18 10 30.88	52 40 3.1	
18 10 49.4	9.2	11 14.24	10 54.9	57 15.20	-15.35	+0 3.85	+ 9.43	-1.78	- 9.20		18 11 17.71	51 27 24.0	

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
18 11 55.2	9.1	12 20.24	11 55.6	15 53.00	-20.11	+0 3.86	+ 9.05	-1.79	- 9.20	18 12 23.73	51 8 41.1
18 12 48.7	8.8	13 14.00	12 45.4	7 20.40	-22.83	+0 3.85	+ 9.13	-1.79	- 9.20	18 13 17.47	51 17 11.2
18 13 44.8	8.9	14 10.88	13 52.9	59 54.05	-14.33	+0 3.85	+ 9.39	-1.80	- 9.20	18 14 14.33	51 24 46.3
18 15 9.4	8.5	15 32.86	15 15.2	54 58.30	-14.06	+0 3.85	+ 9.46	-1.80	- 9.30	18 15 36.31	51 29 42.5
18 15 27.1	9.3	15 52.08	15 57.0	56 42.70	+ 3.90	+0 3.85	+ 9.57	-1.80	- 9.30	18 15 55.53	51 28 16.2
18 16 59.9	9.4	17 24.40	17 11.5	52 24.30	-10.24	+0 3.85	+ 9.57	-1.81	- 9.30	18 17 27.83	51 32 20.5
18 18 6.4	6.2	18 29.50	18 13.3	10 13.50	-12.95	+0 3.86	+ 9.26	-1.82	- 9.30	18 18 32.95	51 14 28.4
18 19 44.4	8.7	20 9.38	19 47.8	58 19.70	-17.18	+0 3.85	+ 9.38	-1.83	- 9.30	18 20 12.80	51 26 18.2
18 20 52.1	8.3	21 18.70	21 1.7	56 52.60	-13.52	+0 3.84	+ 9.48	-1.83	- 9.30	18 21 22.11	51 27 49.2
18 22 26.8	9.3	22 53.02	22 27.1	21 16.40	-20.30	+0 3.85	+ 8.93	-1.84	- 9.30	18 22 56.46	51 3 18.2
18 23 13.8	8.3	23 38.16	23 26.2	29 27.70	- 9.45	+0 3.83	+ 9.99	-1.84	- 9.30	18 23 41.53	51 55 18.9
18 24 10.6	8.1	24 34.62	24 19.7	51 44.95	-11.83	+0 3.84	+ 9.58	-1.84	- 9.30	18 24 38.02	51 32 58.9
18 25 22.5	7.8	25 46.62	25 26.2	32 49.65	-16.08	+0 3.83	+ 9.86	-1.85	- 9.40	18 25 49.98	51 51 50.3
18 27 11.1	9.1	27 35.66	27 9.0	5 59.40	-21.30	+0 3.84	+ 9.21	-1.86	- 9.30	18 27 39.06	51 18 34.9
18 28 16.8	9.0	28 39.58	28 17.5	24 34.35	-16.98	+0 3.81	+11.07	-1.85	- 9.50	18 28 42.85	53 0 6.0
18 30 31.0	8.3	30 55.08	30 32.7	46 42.40	-17.75	+0 3.83	+ 9.61	-1.87	- 9.40	18 30 58.44	51 37 56.0
18 32 2.8	8.7	32 28.12	32 6.4	17 49.10	-17.39	+0 3.85	+ 9.05	-1.88	- 9.40	18 32 31.52	51 6 49.3
18 33 9.1	8.0	33 32.66	33 8.1	38 26.75	-19.43	+0 3.83	+ 9.72	-1.88	- 9.40	18 33 36.00	51 46 10.4
18 34 19.2	7.5	34 43.92	34 21.6	34 28.90	-17.59	+0 3.83	+ 9.81	-1.89	- 9.40	18 34 47.25	51 50 10.2
18 35 44.8	8.8	36 11.36	35 43.1	16 4.30	-23.15	+0 3.86	+ 7.93	-1.90	- 9.30	18 36 14.81	50 8 27.6
18 37 37.9	8.0	38 4.08	37 33.2	48 53.90	-25.04	+0 3.85	+ 8.35	-1.91	- 9.40	18 38 7.49	50 35 36.6
18 39 32.7	8.9	39 55.20	39 21.9	47 57.65	-25.22	+0 3.77	+11.55	-1.91	- 9.60	18 39 58.34	53 36 35.8
18 41 22.7	8.8	41 47.44	41 26.1	32 1.35	-16.78	+0 3.82	+ 9.89	-1.92	- 9.50	18 41 50.74	51 52 39.2
18 43 5.2	9.2	43 27.18	42 58.2	56 39.10	-22.55	+0 3.81	+10.42	-1.93	- 9.50	18 43 30.42	52 27 56.3
18 44 4.3	8.0	44 26.14	44 7.2	43 20.70	-14.28	+0 3.78	+11.83	-1.94	- 9.60	18 44 29.27	53 41 24.4
18 45 20.5	9.2	45 46.22	45 19.2	44 0.70	-21.84	+0 3.84	+ 8.50	-1.95	- 9.40	18 45 49.58	50 40 33.8
18 46 57.4	8.4	47 24.20	47 3.2	39 53.50	-16.95	+0 3.84	+ 8.65	-1.95	- 9.50	18 47 27.56	50 44 46.1
18 48 18.9	8.8	48 45.66	48 19.9	35 40.25	-20.81	+0 3.84	+ 8.70	-1.96	- 9.50	18 48 49.01	50 48 55.7
18 49 19.6	9.2	49 44.96	49 30.6	58 40.45	-11.49	+0 3.83	+ 9.46	-1.96	- 9.50	18 49 48.26	51 26 5.6
18 50 22.2	9.6	50 47.92	50 31.2	53 27.05	-13.27	+0 3.83	+ 9.53	-1.96	- 9.50	18 50 51.22	51 31 17.4
18 51 23.1	7.8	51 48.14	51 31.0	16 4.05	-13.69	+0 3.84	+ 9.16	-1.97	- 9.50	18 51 51.47	51 8 39.7
18 52 27.1	9.4	52 51.18	52 30.5	54 14.80	-16.09	+0 3.80	+10.57	-1.92	- 9.60	18 52 54.44	52 30 28.0
18 53 37.0	8.0	54 1.94	53 41.1	51 27.40	-16.51	+0 3.82	+ 9.54	-1.98	- 9.50	18 54 5.22	51 33 14.1
18 55 5.8	9.7	55 32.10	55 14.7	9 8.85	-13.99	+0 3.83	+ 9.24	-1.99	- 9.50	18 55 35.40	51 15 35.0
18 56 38.2	8.8	57 4.02	56 40.7	0 55.60	-18.55	+0 3.82	+ 9.37	-1.99	- 9.60	18 57 7.30	51 23 43.9
18 57 41.0	9.2	58 6.74	57 37.3	22 10.85	-23.59	+0 3.83	+ 8.88	-2.00	- 9.50	18 58 10.04	51 2 23.3
18 59 27.6	8.1	59 53.58	59 34.2	0 29.20	-15.61	+0 3.83	+ 9.41	-2.00	- 9.60	18 59 56.86	51 24 13.5
19 0 28.6	9.1	0 54.62	0 37.3	46 2.10	-13.70	+0 3.82	+ 9.69	-2.01	- 9.60	19 0 57.87	51 38 42.9
19 2 2.4	9.1	2 27.92	2 11.0	4 37.55	-13.18	+0 3.80	+10.40	-2.00	- 9.60	19 2 31.12	52 20 8.8
19 3 51.4	8.7	4 18.38	3 49.2	56 22.55	-23.72	+0 3.84	+ 8.23	-1.93	- 9.60	19 4 21.81	50 28 11.2
19 4 48.3	7.8	5 15.56	4 54.4	21 18.45	-17.37	+0 3.84	+ 7.92	-2.03	- 9.50	19 5 18.91	50 3 21.5
19 6 16.4	9.1	6 44.12	6 16.8	35 53.50	-22.02	+0 3.83	+ 8.68	-2.04	- 9.60	19 6 47.41	50 48 42.6
19 7 17.2	9.0	7 44.14	7 23.5	6 35.35	-16.74	+0 3.80	+ 8.30	-2.03	- 9.60	19 7 47.44	50 18 5.8
19 8 22.7	8.3	8 47.96	8 30.0	59 11.25	-14.01	+0 3.79	+10.49	-2.04	- 9.60	19 8 51.12	52 25 34.8
ZONE 328, AUGUST 26, 1874.											
18 6 15.8	8.8	6 41.88	6 16.0	33 39.65	-20.42	+0 3.31	+ 9.82	-1.70	- 9.50	18 6 44.86	51 50 54.4
18 7 25.5	8.9	7 52.34	7 31.7	55 49.20	-16.37	+0 3.32	+ 9.52	-1.71	- 9.50	18 7 55.34	51 28 48.7
18 8 41.2	8.0	9 4.46	8 43.3	7 39.65	-16.55	+0 3.31	+10.36	-1.71	- 9.50	18 9 7.40	52 16 59.0
18 10 4.4	8.9	10 27.94	10 3.3	44 32.95	-19.04	+0 3.30	+10.73	-1.71	- 9.60	18 10 30.85	52 40 3.6
18 10 49.4	9.4	11 14.78	11 9.7	57 27.05	- 4.05	+0 3.32	+ 9.59	-1.72	- 9.60	18 11 17.78	51 27 23.4
18 11 55.2	9.2	12 20.76	12 4.9	16 0.80	-12.73	+0 3.33	+ 9.22	-1.73	- 9.50	18 12 23.78	51 8 40.8
18 12 48.7	8.7	13 14.54	13 4.1	7 35.45	- 8.30	+0 3.32	+ 9.38	-1.73	- 9.50	18 13 17.54	51 17 10.8

R. A. 1855.0 According to B. D.	Obs Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.			Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.		R. A.	Dec.		
h m s		m s	m s	' "	"	m s	s	s	s	"	h m s	° ' "
18 13 44.8	9.0	14 11.28	13 57.9	59 57.05	-10.67	+0 3.32	+ 9.50	-1.73	- 9.50		18 14 14.27	51 24 47.1
18 15 9.4	8.2	15 33.52	15 14.4	54 57.60	-15.18	+0 3.31	+ 9.53	-1.74	- 9.50		18 15 36.49	51 29 42.2
18 15 27.1	9.1	15 52.62	16 4.8	56 46.90	+ 9.70	+0 3.33	+ 9.62	-1.74	- 9.50		18 15 55.61	51 28 17.8
18 16 59.9	9.3	17 24.92	17 5.0	52 17.35	-15.80	+0 3.31	+ 9.58	-1.75	- 9.60		18 17 27.87	51 32 21.9
18 18 6.4	6.8	18 29.98	18 8.4	10 9.70	-17.26	+0 3.32	+ 9.27	-1.75	- 9.60		18 18 32.96	51 14 27.9
18 19 44.4	8.9	20 9.98	19 45.1	58 16.25	-19.81	+0 3.31	+ 9.41	-1.77	- 9.60		18 20 12.92	51 26 19.0
18 20 52.1	8.5	21 19.32	21 2.6	56 53.30	-13.28	+0 3.31	+ 9.55	-1.78	- 9.60		18 21 22.25	51 27 48.8
18 22 26.8	9.2	22 53.62	22 27.9	21 16.65	-20.61	+0 3.32	+ 8.99	-1.78	- 9.60		18 22 56.59	51 3 17.7
18 23 13.8	8.1	23 38.76	23 26.5	29 26.40	- 9.68	+0 3.30	+10.06	-1.78	- 9.70		18 23 41.66	51 55 19.9
18 24 10.6	8.4	24 35.10	24 24.9	51 50.50	- 8.10	+0 3.31	+ 9.68	-1.79	- 9.90		18 24 38.02	51 32 56.9
18 25 22.5	7.7	25 47.24	25 30.1	32 54.10	-13.48	+0 3.29	+ 9.96	-1.79	- 9.70		18 25 50.12	51 51 48.5
18 27 11.1	8.6	27 36.14	27 18.4	6 7.20	-14.12	+0 3.30	+ 9.39	-1.80	- 9.60		18 27 39.06	51 18 34.4
18 28 16.8	9.0	28 40.08	28 17.6	24 34.95	-17.28	+0 3.27	+11.15	-1.80	- 9.80		18 28 42.86	53 0 5.2
18 31 10.5	6.4	31 34.10	31 14.1	43 42.15	-15.83	+0 3.29	+ 9.72	-1.82	- 9.80		18 31 36.97	51 40 58.2
18 32 2.8	8.9	32 28.62	32 15.3	17 56.55	-10.66	+0 3.31	+ 9.19	-1.83	- 9.70		18 32 31.53	51 6 48.7
18 33 9.1	8.0	33 33.40	33 12.3	38 29.00	-16 67	+0 3.29	+ 9.83	-1.83	- 9.80		18 33 36.25	51 46 10.8
18 34 19.2	7.8	34 44.54	34 31.3	34 34.35	-10.41	+0 3.29	+ 9.96	-1.84	- 9.80		18 34 47.38	51 50 12.0
18 35 44.8	8.7	36 12.00	35 48.0	16 7.05	-19.62	+0 3.32	+ 8.06	-1.85	- 9.70		18 36 14.96	50 8 28.4
18 37 37.9	8.2	38 4.72	37 34.0	48 55.25	-24.87	+0 3.30	+ 8.40	-1.86	- 9.70		18 38 7.63	50 35 35.4
18 39 9.9	8.5	39 34.28	39 6.9	23 22.40	-21.00	+0 3.25	+11.12	-1.84	- 9.90		18 39 37.01	53 1 14.8
18 40 8.8	9.4	40 34.75	40 29.3	8 9.50	- 4.31	+0 3.29	+ 9.40	-1.87	- 9.80		18 40 37.60	51 16 42.9
18 41 22.7	8.6	41 48.02	41 28.2	32 1.45	-15.60	+0 3.28	+ 9.98	-1.87	- 9.80		18 41 50.83	51 52 40.3
18 43 5.2	9.2	43 27.84	43 6.8	56 44.10	-16.33	+0 3.27	+10.60	-1.87	- 9.90		18 43 30.60	52 27 57.6
18 44 4.3	7.9	44 26.68	44 9.9	43 20.60	-12.70	+0 3.24	+11.94	-1.87	-10.00		18 44 29.34	53 41 26.0
18 45 20.5	9.2	45 46.86	45 20.4	44 59.45	-21.43	+0 3.30	+ 8.56	-1.90	- 9.80		18 45 49.73	50 40 35.4
18 46 57.4	8.8	47 24.80	47 3.3	39 52.35	-17.36	+0 3.30	+ 8.69	-1.90	- 9.90		18 47 27.67	50 44 46.8
18 48 18.9	8.8	48 46.24	48 23.8	35 40.75	-18.06	+0 3.30	+ 8.81	-1.91	- 9.80		18 48 49.10	50 48 58.0
18 49 19.6	9.1	49 45.56	49 28.2	58 38.90	-13.85	+0 3.28	+ 9.50	-1.91	- 9.90		18 49 48.36	51 26 4.7
18 50 22.2	9.8	50 48.50	51 20.4	54 6.45	+25.34	+0 3.28	+ 9.41	-1.91	- 9.90		18 50 51.30	51 31 16.4
18 51 23.1	8.0	51 48.70	52 12.1	16 34.00	+18.74	+0 3.29	+ 9.17	-1.92	- 9.90		18 51 51.53	51 8 42.0
18 53 37.0	7.7	54 2.41	53 39.9	51 25.40	-17.86	+0 3.28	+ 9.60	-1.93	- 9.90		18 54 5.20	51 33 14.7
18 55 5.8	10.0	55 32.66	55 31.6	9 24.30	- 0.96	+0 3.29	+ 9.39	-1.94	- 9.90		18 55 35.47	51 15 32.6
18 56 38.2	9.0	57 4.52	56 41.7	0 55.05	-18.16	+0 3.28	+ 9.44	-1.94	- 9.90		18 57 7.31	51 23 44.8
18 57 41.0	9.2	58 7.38	57 49.1	22 18.80	-14.58	+0 3.29	+ 9.08	-1.94	- 9.90		18 58 10.20	51 2 24.4
18 59 27.6	8.6	59 54.08	59 29.2	0 23.55	-19.83	+0 3.29	+ 9.42	-1.95	-10.00		18 59 56.87	51 24 14.8
19 0 28.6	9.3	0 55.08	0 36.3	45 59.65	-14.89	+0 3.28	+ 9.74	-1.96	-10.00		19 0 57.84	51 38 44.0
19 2 2.4	9.4	2 28.38	2 9.0	4 35.10	-15.13	+0 3.26	+10.47	-1.96	-10.10		19 2 31.08	52 20 9.1
19 3 51.4	8.8	4 19.00	3 57.5	56 27.20	-17.46	+0 3.28	+ 8.45	-1.98	-10.00		19 4 21.82	50 28 12.9
19 4 48.3	7.8	5 16.08	4 54.1	21 17.25	-18.02	+0 3.29	+ 7.97	-1.97	- 9.90		19 5 18.94	50 3 22.0
19 6 16.4	8.9	6 44.72	6 19.0	35 55.00	-20.73	+0 3.28	+ 8.76	-1.99	-10.00		19 6 47.51	50 48 42.3
19 7 17.2	8.7	7 44.62	7 21.6	6 32.95	-18.69	+0 3.26	+ 8.36	-1.98	-10.00		19 7 47.43	50 18 6.1
19 8 22.7	8.2	8 48.40	8 28.4	59 8.90	-15.56	+0 3.26	+10.55	-1.99	-10.10		19 8 51.08	52 25 35.5
ZONE 329, AUGUST 27, 1874.												
17 56 36.6	8.0	57 2.66	57 23.7	29 34.35	+16.90	+0 2.91	+ 8.83	-1.63	- 9.30		17 57 5.37	50 55 36.6
17 58 39.8	9.1	59 4.82	58 53.2	14 32.75	- 9.28	+0 2.91	+ 9.17	-1.64	- 9.30		17 59 7.50	51 10 12.6
17 59 52.2	8.7	0 17.28	0 21.3	49 5.35	+ 3.10	+0 2.88	+10.75	-1.63	- 9.60		18 0 19.85	52 35 53.8
18 0 21.5	8.8	0 48.24	0 1.9	49 5.35	-35.90	+0 2.88	+10.18	-1.64	- 9.60		18 0 50.80	52 35 14.2
18 2 21.1	8.7	2 44.58	2 22.1	24 43.40	-17.68	+0 2.89	+ 9.97	-1.65	- 9.70		18 2 47.18	51 59 54.3
18 4 19.1	8.5	4 42.70	4 9.9	14 37.45	-25.10	+0 2.86	+11.07	-1.65	- 9.80		18 4 45.20	53 9 54.0
18 5 57.6	9.1	6 20.88	5 53.4	12 59.05	-21.03	+0 2.85	+11.22	-1.66	- 9.80		18 6 23.35	53 11 36.7
18 7 42.9	7.8	8 4.16	7 36.5	56 19.75	-23.83	+0 2.84	+11.49	-1.66	- 9.70		18 8 6.61	53 28 13.7
18 9 14.8	8.8	9 40.22	9 20.0	27 44.30	-15.89	+0 2.88	+ 9.96	-1.69	- 9.70		18 9 42.78	51 56 55.7

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red to Horiz. Wire.	Sum of Reductions.			Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.		R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"		s "		h m s	° ' "
18 10 13.9	8.5	10 37.16	10 23.7	57 17.50	-10.50	+0 2.87	+10.57	-1.69	- 9.70		18 10 39.67	52 27 28.6
18 10 51.6	9.3	11 16.00	11 48.4	47 1.10	+25.10	+0 2.87	+10.54	-1.69	- 9.80		18 11 18.50	52 38 20.6
18 11 55.2	8.0	12 17.38	12 12.7	18 1.05	- 3.68	+0 2.88	+10.24	-1.70	- 9.70		18 12 19.92	52 6 51.7
18 13 5.0	8.6	13 28.14	13 2.2	35 13.25	-19.97	+0 2.86	+10.86	-1.69	- 9.70		18 13 30.62	52 49 23.9
18 13 45.0	9.2	14 12.64	14 2.7	24 57.50	- 7.95	+0 2.90	+ 9.00	-1.72	- 9.70		18 14 15.24	50 59 49.9
18 15 9.4	8.5	15 33.66	15 13.4	54 56.60	-16.13	+0 2.89	+ 9.46	-1.72	- 9.70		18 15 36.23	51 29 43.2
18 16 2.3	9.0	16 27.74	16 4.2	20 23.30	-18.84	+0 2.90	+ 8.99	-1.73	- 9.80		18 16 30.33	51 4 13.3
18 16 59.9	9.4	17 25.32	17 10.9	52 22.50	-11.43	+0 2.89	+ 9.58	-1.73	- 9.80		18 17 27.87	51 32 22.2
18 18 22.3	9.1	18 48.38	18 24.0	50 39.25	-19.36	+0 2.89	+ 9.52	-1.74	- 9.70		18 18 50.92	51 33 57.7
18 20 23.6	8.1	20 47.54	20 17.4	49 57.50	-23.87	+0 2.89	+ 9.40	-1.74	- 9.80		18 20 50.08	51 34 34.9
18 22 54.4	8.8	23 19.82	22 58.2	28 1.00	-17.07	+0 2.88	+ 9.95	-1.75	- 9.80		18 23 22.32	51 56 38.9
18 24 2.6	8.1	24 27.74	24 11.6	18 59.35	-12.91	+0 2.89	+ 9.05	-1.77	- 9.80		18 24 30.28	51 5 44.0
18 25 58.6	9.0	26 25.14	26 3.8	53 45.15	-17.28	+0 2.89	+ 8.40	-1.78	- 9.80		18 26 27.71	50 30 53.3
18 27 4.1	9.0	27 31.26	27 12.9	24 7.65	-15.09	+0 2.89	+ 7.92	-1.79	- 9.80		18 27 33.85	50 0 32.6
18 28 31.4	9.0	28 55.20	28 32.3	38 41.35	-17.69	+0 2.85	+10.81	-1.77	-10.00		18 28 57.60	52 45 59.1
18 30 0.8	8.9	30 25.86	30 0.3	40 4.60	-20.24	+0 2.87	+ 9.64	-1.79	- 9.90		18 30 28.33	51 44 32.4
18 31 10.5	6.3	31 34.26	31 11.6	43 39.25	-17.96	+0 2.87	+ 9.64	-1.79	- 9.90		18 31 36.74	51 41 0.1
18 32 2.8	8.7	32 28.92	32 13.3	17 55.05	-12.50	+0 2.89	+ 9.09	-1.80	- 9.90		18 32 31.44	51 6 49.3
18 33 44.0	8.8	34 10.98	33 50.0	13 28.45	-17.16	+0 2.90	+ 8.06	-1.82	- 9.90		18 34 13.55	50 11 10.4
18 35 44.8	8.5	36 12.34	36 4.4	16 22.60	- 6.46	+0 2.90	+ 8.15	-1.83	- 9.90		18 36 14.90	50 8 27.2
18 37 37.9	7.9	38 5.06	37 47.3	49 5.75	-14.42	+0 2.89	+ 8.53	-1.85	- 9.90		18 38 7.57	50 35 36.6
18 39 43.4	9.6	40 5.86	39 56.0	51 25.35	- 7.33	+0 2.81	+12.83	-1.81	-10.20		18 40 8.08	54 33 28.3
18 41 46.5	8.8	42 9.40	41 42.8	33 11.10	-19.54	+0 2.80	+12.97	-1.82	-10.20		18 42 11.58	54 51 30.6
18 43 5.2	9.3	43 28.22	43 6.3	56 44.35	-17.03	+0 2.85	+10.52	-1.84	-10.10		18 43 30.59	52 27 57.6
18 44 52.9	8.7	45 19.46	44 56.1	52 6.40	-18.57	+0 2.87	+ 9.51	-1.86	-10.10		18 45 21.89	51 32 33.2
18 50 14.7	9.1	50 43.26	50 28.7	4 37.00	-11.64	+0 2.87	+ 9.35	-1.88	-10.10		18 50 45.69	51 20 9.8
18 53 32.1	8.1	53 58.60	.....	.....	.....	+0 2.87	.....	-1.90	.....		18 54 1.02	.....
18 56 34.7	5.0	57 2.50	56 32.3	3 8.15	-24.59	+0 2.87	+ 8.16	-1.92	-10.10		18 57 4.96	50 21 25.1
18 57 48.4	9.5	58 14.48	57 57.1	34 9.85	-13.80	+0 2.85	+ 8.88	-1.92	-10.20		18 58 16.83	51 50 34.9
18 58 42.3	5.5	59 8.20	58 46.3	19 54.20	-17.18	+0 2.85	+10.10	-1.92	-10.20		18 59 10.54	52 4 48.5
19 0 19.5	8.7	0 45.20	0 22.3	28 54.25	-17.62	+0 2.83	+11.01	-1.92	-10.30		19 0 47.47	52 55 48.9
19 2 2.4	9.1	2 28.66	2 8.3	4 36.20	-15.91	+0 2.84	+10.39	-1.93	-10.30		19 2 30.97	52 20 8.2
19 3 46.9	8.0	4 12.68	3 43.3	13 38.20	-23.52	+0 2.86	+ 9.05	-1.95	-10.20		19 4 15.07	51 10 57.5
19 4 23.9	8.0	4 50.98	4 42.9	30 42.85	- 6.38	+0 2.85	+10.05	-1.95	-10.30		19 4 53.31	51 54 11.0
19 5 5.7	9.4	5 32.85	5 59.6	29 39.95	+21.10	+0 2.85	+ 9.84	-1.95	-10.30		19 5 35.18	51 55 41.2
19 7 8.9	8.2	7 37.00	7 3.5	53 40.90	-27.19	+0 2.87	+ 8.24	-1.97	-10.20		19 7 39.42	50 30 50.6
ZONE 330, AUGUST 31, 1874.												
18 7 42.9	8.0	8 5.74	7 39.5	56 21.25	-19.90	+0 1.05	+11.18	-1.53	-10.20		18 8 6.53	53 28 15.3
18 9 14.8	9.0	9 41.82	9 22.8	27 45.15	-14.95	+0 1.09	+ 9.69	-1.56	-10.10		18 9 42.72	51 56 55.1
18 10 13.9	8.5	10 38.76	10 19.8	57 12.50	-14.78	+0 1.08	+10.20	-1.56	-10.20		18 10 39.61	52 27 28.4
18 10 51.6	9.1	11 17.58	11 46.7	46 56.70	+22.55	+0 1.08	+10.27	-1.56	-10.30		18 11 18.42	52 38 21.5
18 11 55.2	8.1	12 19.06	12 14.0	17 57.70	- 4.00	+0 1.09	+ 9.95	-1.57	-10.20		18 12 19.94	52 6 53.8
18 13 5.0	7.8	13 29.72	13 9.7	35 16.50	-15.42	+0 1.07	+10.62	-1.57	-10.20		18 13 30.53	52 49 24.4
18 13 45.0	9.4	14 14.40	13 58.2	24 51.35	-12.53	+0 1.11	+ 8.71	-1.59	-10.20		18 14 15.34	50 59 50.6
18 15 9.4	9.6	15 35.48	15 12.3	54 55.40	-18.43	+0 1.09	+ 9.15	-1.60	-10.20		18 15 36.37	51 29 41.2
18 20 23.6	8.3	20 49.24	20 23.7	49 58.40	-20.22	+0 1.09	+ 9.19	-1.62	-10.30		18 20 50.10	51 34 36.8
18 21 41.6	8.5	22 9.22	21 48.3	52 32.90	-16.59	+0 1.08	+ 9.25	-1.63	-10.50		18 22 10.07	51 32 5.9
18 22 54.4	8.3	23 21.40	23 2.1	28 1.40	-15.18	+0 1.08	+ 9.70	-1.63	-10.40		18 23 22.22	51 56 39.5
18 24 2.6	8.3	24 29.40	24 26.6	19 7.95	- 2.24	+0 1.09	+ 8.88	-1.65	-10.40		18 24 30.26	51 5 45.2
18 25 58.6	9.1	26 26.70	26 12.9	53 49.50	-11.28	+0 1.10	+ 8.23	-1.67	-10.30		18 26 27.59	50 30 54.2
18 27 4.1	9.1	27 32.92	27 10.0	24 2.30	-18.78	+0 1.10	+ 7.63	-1.68	-10.30		18 27 33.83	50 0 33.4
18 28 31.4	9.4	28 56.78	28 36.4	38 43.30	-15.68	+0 1.05	+10.53	-1.65	-10.40		18 28 57.50	52 45 58.4

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.			Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.		R.A.	Dec.		
h m s		m s	m s	' "	"	m s	"		s	"	h m s	° ' "
18 30 0.8	9.7	30 27.55	30 3.5	40 3.25	-18.97	+0 1.07	+ 9.41	-1.68	-10.50		18 30 28.33	51 44 34.1
18 31 10.5	7.7	31 35.98	31 18.8	43 42.80	-13.61	+0 1.07	+ 9.42	-1.68	-10.50		18 31 36.77	51 41 0.0
18 32 2.8	8.7	32 30.66	32 23.1	18 1.25	- 6.09	+0 1.09	+ 8.90	-1.69	-10.50		18 32 31.49	51 6 48.6
18 33 44.0	8.5	34 12.54	33 47.3	13 24.50	-20.69	+0 1.10	+ 7.78	-1.71	-10.50		18 34 13.42	50 11 9.8
18 35 44.8	8.6	36 13.90	35 56.3	16 13.30	-14.39	+0 1.10	+ 7.84	-1.72	-10.50		18 36 14.77	50 8 27.5
18 37 37.9	7.7	38 6.70	37 33.6	48 52.00	-26.81	+0 1.09	+ 8.07	-1.74	-10.50		18 38 7.52	50 35 36.8
18 39 43.4	9.3	40 7.60	39 51.2	51 17.45	-12.14	+0 1.00	+12.47	-1.69	-10.90		18 40 8.13	54 33 30.2
18 41 46.5	8.8	42 11.18	41 47.2	33 10.65	-17.63	+0 0.97	+12.72	-1.70	-10.90		18 42 11.65	54 51 31.9
18 43 5.2	9.0	43 29.74	43 5.3	56 42.10	-18.97	+0 1.04	+10.20	-1.73	-10.80		18 43 30.41	52 27 56.8
18 44 52.9	8.6	45 21.16	45 1.4	52 8.00	-15.71	+0 1.06	+ 9.26	-1.75	-10.70		18 45 21.89	51 32 33.5
18 47 8.5	8.3	47 35.92	47 14.9	41 18.50	-16.60	+0 1.05	+ 9.46	-1.76	-10.80		18 47 36.62	51 43 22.4
18 48 8.5	8.8	48 37.00	48 20.3	18 0.65	-13.38	+0 1.07	+ 8.86	-1.77	-10.80		18 48 37.75	51 6 43.0
18 49 11.6	8.7	49 39.38	49 28.3	59 34.10	- 8.84	+0 1.05	+ 9.17	-1.77	-10.80		18 49 40.10	51 25 14.4
18 50 14.7	9.1	50 45.04	50 36.0	4 41.20	- 7.18	+0 1.06	+ 9.12	-1.78	-10.80		18 50 45.76	51 20 9.1
18 52 12.4	8.8	52 42.18	52 30.1	1 13.00	- 9.84	+0 1.07	+ 8.39	-1.80	-10.80		18 52 42.95	50 23 34.0
18 53 32.1	8.0	54 0.22	53 39.4	4 27.70	-16.59	+0 1.06	+ 9.30	-1.79	-10.80		18 54 0.94	51 20 13.6
18 55 8.1	8.6	55 35.30	55 12.5	24 14.50	-17.91	+0 1.04	+ 9.71	-1.79	-10.90		18 55 35.96	52 0 25.9
18 56 34.7	5.0	57 4.32	56 40.0	3 11.50	-22.40	+0 1.06	+ 8.02	-1.82	-10.80		18 57 5.07	50 21 23.0
18 57 48.4	9.4	58 16.32	57 54.5	34 3.95	-17.19	+0 1.03	+ 8.58	-1.81	-10.90		18 58 16.96	51 50 36.3
18 58 42.3	5.8	59 10.02	58 54.9	19 57.40	-11.84	+0 1.04	+ 9.88	-1.81	-10.90		18 59 10.66	52 4 49.6
19 0 19.5	8.3	0 47.00	0 26.0	28 53.85	-16.16	+0 1.01	+10.71	-1.82	-11.00		19 0 47.55	52 55 49.7
19 2 2.4	9.3	2 30.40	2 13.4	4 38.25	-13.26	+0 1.02	+10.12	-1.83	-11.00		19 2 30.99	52 20 7.7
19 3 46.9	7.8	4 14.50	3 56.0	13 44.60	-14.80	+0 1.05	+ 8.92	-1.85	-11.00		19 4 15.18	51 10 58.8
19 4 23.9	8.4	4 52.68	4 37.6	30 35.30	-11.73	+0 1.02	+ 9.72	-1.85	-11.00		19 4 53.28	51 54 12.1
19 5 5.7	9.3	5 34.56	5 59.6	29 37.60	+19.68	+0 1.04	+ 9.57	-1.85	-11.00		19 5 35.18	51 55 41.0
19 7 8.9	8.6	7 38.72	7 17.8	53 49.70	-16.96	+0 1.05	+ 8.18	-1.87	-11.00		19 7 39.42	50 30 51.1
ZONE 331, SEPTEMBER 1, 1874.												
18 13 24.7	7.9	13 52.24	13 30.7	13 38.75	-17.20	+0 0.66	+ 8.91	-1.56	-10.30		18 13 52.75	51 10 57.9
18 15 0.2	9.0	15 25.20	15 6.0	14 14.25	-15.03	+0 0.65	+ 9.96	-1.57	-10.40		18 15 25.63	52 10 25.7
18 16 35.0	8.9	17 1.96	16 41.2	37 55.85	-16.06	+0 0.63	+10.61	-1.56	-10.50		18 17 2.35	52 46 43.7
18 18 24.0	7.7	18 48.78	18 22.1	34 8.00	-20.57	+0 0.63	+10.62	-1.56	-10.50		18 18 49.16	52 50 27.2
18 20 6.7	8.8	20 34.30	20 8.3	41 2.70	-21.01	+0 0.66	+ 8.40	-1.61	-10.40		18 20 34.79	50 43 30.1
18 21 30.3	9.1	22 1.32	21 47.5	56 30.20	-11.21	+0 0.67	+ 9.27	-1.61	-10.40		18 22 1.84	50 28 13.5
18 22 52.8	9.1	23 19.24	22 49.7	13 28.80	-21.55	+0 0.66	+ 9.88	-1.60	-10.60		18 23 19.66	52 11 5.0
18 24 0.0	9.3	24 32.52	24 9.7	3 36.50	-18.57	+0 0.67	+ 8.03	-1.63	-10.40		18 24 33.03	50 20 58.8
18 25 22.5	7.8	25 49.64	25 30.4	32 51.40	-15.13	+0 0.65	+ 9.66	-1.61	-10.60		18 25 50.06	51 51 48.8
18 27 37.7	8.9	28 7.58	27 47.7	16 35.90	-15.94	+0 0.65	+ 8.89	-1.64	-10.60		18 28 8.02	51 8 3.0
18 28 34.9	9.0	29 0.42	28 40.9	48 2.35	-15.11	+0 0.63	+10.46	-1.62	-10.70		18 29 0.77	52 36 38.9
18 30 9.8	8.3	30 32.18	30 16.9	32 4.80	-11.23	+0 0.57	+12.91	-1.60	-10.90		18 30 32.34	54 52 42.7
18 31 59.5	7.9	32 24.04	32 41.7	18 51.05	+13.25	+0 0.59	+12.00	-1.62	-10.90		18 32 24.25	54 6 20.2
18 32 58.5	9.0	33 22.52	33 11.7	40 43.60	- 7.96	+0 0.57	+12.79	-1.62	-10.90		18 33 22.67	54 44 7.3
18 33 57.2	8.0	34 22.28	34 3.9	42 22.65	-13.57	+0 0.57	+12.69	-1.63	-10.90		18 34 22.42	54 42 22.6
18 35 15.0	8.2	35 40.10	35 20.6	38 23.30	-14.71	+0 0.59	+11.66	-1.64	-10.90		18 35 40.32	53 46 19.9
18 36 45.9	8.5	37 12.00	36 47.7	12 7.10	-18.57	+0 0.60	+11.06	-1.66	-10.90		18 37 12.25	53 12 31.8
18 37 46.8	9.0	38 12.06	37 49.0	31 0.00	-17.37	+0 0.59	+11.75	-1.65	-10.90		18 38 12.26	53 53 40.9
18 39 9.9	8.6	39 36.70	39 6.7	23 18.20	-23.04	+0 0.60	+11.73	-1.67	-10.90		18 39 36.95	53 1 17.1
18 39 49.8	9.3	40 14.00	40 5.1	41 0.30	- 6.56	+0 0.56	+12.81	-1.66	-11.00		18 40 14.11	54 43 52.5
18 41 25.8	9.2	41 56.62	41 35.2	13 34.00	-17.12	+0 0.64	+ 8.94	-1.71	-10.80		18 41 56.99	51 11 4.7
18 43 5.2	9.1	43 30.16	43 6.9	56 42.70	-18.12	+0 0.62	+10.28	-1.70	-10.90		18 43 30.44	52 27 56.4
18 44 4.3	7.8	44 29.22	44 15.7	43 22.30	-10.20	+0 0.58	+11.63	-1.69	-11.00		18 44 29.40	53 41 26.0
18 45 54.4	8.8	46 20.18	45 50.7	53 14.25	-22.91	+0 0.62	+10.25	-1.71	-11.00		18 46 20.45	52 31 20.2
18 46 53.1	8.6	47 23.34	46 57.5	13 2.60	-20.64	+0 0.63	+ 8.88	-1.74	-10.90		18 47 23.67	51 11 32.9

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
18 47 58.4	8.5	48 26.24	48 6.7	43 59.65	-15.43	+0 0.62	+ 9.46	-1.74	-11.00	18 48 26.54	51 40 41.6
18 48 57.2	8.2	49 25.24	49 0.8	30 14.55	-19.21	+0 0.62	+ 9.68	-1.74	-11.00	18 49 25.53	51 54 23.3
18 50 46.9	8.4	51 16.86	50 51.9	59 13.25	-20.33	+0 0.64	+ 8.08	-1.76	-10.90	18 51 17.24	50 25 22.1
18 52 55.7	9.0	53 23.28	53 11.4	21 18.70	- 8.91	+0 0.57	+12.04	-1.74	-11.20	18 53 23.39	54 3 31.9
18 54 29.6	9.0	54 58.28	54 39.6	43 29.10	-13.80	+0 0.55	+12.68	-1.73	-11.20	18 54 58.34	54 41 17.4
18 55 41.7	7.7	56 6.64	55 47.9	42 57.95	-13.79	+0 0.55	+12.69	-1.74	-11.30	18 56 6.69	54 41 48.6
18 57 1.6	8.1	57 27.08	57 4.2	55 59.75	-16.98	+0 0.56	+12.42	-1.75	-11.30	18 57 27.15	54 28 43.4
18 59 25.5	8.8	59 49.54	59 27.3	55 47.10	-16.46	+0 0.56	+12.45	-1.76	-11.30	18 59 49.60	54 28 56.8
19 0 48.8	7.5	1 14.66	0 49.5	12 33.05	-18.82	+0 0.56	+12.08	-1.78	-11.30	19 1 14.72	54 12 8.2
19 2 2.4	9.4	2 30.86	2 12.9	4 35.40	-14.04	+0 0.61	+10.17	-1.80	-11.20	19 2 31.07	52 20 9.0
19 3 34.5	7.7	4 3.68	3 34.1	56 54.60	-23.54	+0 0.63	+ 9.12	-1.82	-11.20	19 4 3.95	51 27 39.4
19 4 28.7	8.0	4 56.40	4 32.4	37 37.40	-18.53	+0 0.60	+10.61	-1.81	-11.30	19 4 56.57	52 47 3.0
19 5 20.8	9.0	5 48.90	5 37.0	29 5.20	- 9.37	+0 0.62	+ 9.80	-1.57	-10.50	19 5 49.38	51 55 44.5
19 6 23.2	8.9	6 53.30	6 37.9	12 49.00	-12.32	+0 0.63	+ 9.02	-1.84	-11.20	19 6 53.57	51 11 56.3
19 7 43.1	7.4	8 12.42	7 50.3	35 43.85	-17.44	+0 0.61	+ 9.62	-1.84	-11.30	19 8 12.64	51 48 57.0
19 9 36.0	9.1	10 3.46	9 41.0	19 1.80	-17.24	+0 0.58	+10.95	-1.83	-11.40	19 10 3.58	53 5 40.6
19 11 55.8	8.9	12 22.28	12 2.2	29 12.40	-15.11	+0 0.56	+11.81	-1.84	-11.40	19 12 22.33	53 55 33.2
19 13 47.0	3.5	14 12.88	13 48.1	16 21.60	-18.98	+0 0.58	+10.98	-1.85	-11.40	19 14 12.99	53 8 19.4
19 14 58.0	8.4	15 24.08	15 3.9	11 5.05	-15.43	+0 0.58	+11.13	-1.86	-11.40	19 15 24.18	53 13 39.8
19 16 10.8	9.2	16 41.98	16 20.1	18 31.45	-17.55	+0 0.62	+ 9.85	-1.87	-11.30	19 16 42.24	51 6 10.2
19 17 29.6	9.0	17 58.26	17 39.2	42 24.90	-14.77	+0 0.59	+10.60	-1.88	-11.40	19 17 58.39	52 42 20.3
19 19 7.4	7.9	19 36.44	19 12.1	36 22.35	-18.75	+0 0.59	+10.66	-1.89	-11.20	19 19 36.56	52 48 19.2
19 19 49.6	8.8	20 19.16	20 7.9	23 40.80	- 8.68	+0 0.57	+10.98	-1.84	-11.50	19 20 19.29	53 1 10.9
19 21 21.2	9.5	21 50.38	21 26.9	30 20.10	-18.09	+0 0.57	+10.79	-1.90	-11.50	19 21 50.47	52 54 22.2
ZONE 332, SEPTEMBER 2, 1874.											
18 16 35.0	9.0	17 2.28	16 42.0	37 56.25	-15.67	+0 0.06	+10.64	-1.53	-10.60	18 17 2.13	52 46 44.3
18 18 24.0	7.7	18 49.28	18 26.2	34 11.20	-17.81	+0 0.06	+10.67	-1.54	-10.70	18 18 49.11	52 50 27.3
18 20 6.7	8.4	20 34.76	20 10.1	41 4.90	-19.96	+0 0.10	+ 8.41	-1.58	-10.50	18 20 34.72	50 43 29.6
18 21 52.4	9.0	22 23.98	22 2.1	58 31.90	-17.81	+0 0.10	+ 9.13	-1.60	-10.50	18 22 23.94	50 26 5.6
18 22 52.8	9.1	23 19.78	23 2.1	13 37.90	-13.85	+0 0.09	+10.01	-1.57	-10.77	18 23 19.66	52 11 4.3
18 24 0.0	9.2	24 32.96	24 11.5	3 38.05	-17.51	+0 0.10	+ 8.05	-1.60	-10.60	18 24 32.93	50 20 58.8
18 25 22.5	7.7	25 50.12	25 29.9	32 51.00	-15.92	+0 0.07	+ 9.66	-1.69	-10.70	18 25 49.88	51 51 49.0
18 27 37.7	9.1	28 8.02	27 44.7	16 33.30	-18.66	+0 0.09	+ 8.88	-1.62	-10.70	18 28 7.92	51 8 3.4
18 28 34.9	8.9	29 0.92	28 40.1	48 1.45	-15.75	+0 0.06	+10.44	-1.59	-10.80	18 29 0.73	52 36 39.7
18 30 9.8	8.5	30 32.80	30 5.9	31 56.40	-19.75	+0 0.00	+12.79	-1.57	-11.00	18 30 32.42	54 52 43.0
18 31 59.5	7.8	32 24.50	32 3.6	18 22.35	-15.64	+0 0.02	+11.99	-1.59	-11.00	18 32 24.17	54 6 20.6
18 32 58.5	8.6	33 23.14	33 2.5	40 36.45	-15.18	+0 0.00	+12.72	-1.58	-11.10	18 33 22.76	54 44 7.6
18 33 57.2	7.8	34 22.72	34 5.6	42 24.60	-12.61	+0 0.00	+12.71	-1.59	-11.10	18 34 22.33	54 42 22.1
18 35 15.0	8.0	35 40.66	35 20.6	38 23.90	-15.16	+0 0.02	+11.65	-1.61	-11.00	18 35 40.34	53 46 19.4
18 36 45.9	8.0	37 12.38	36 51.5	12 9.85	-15.97	+0 0.03	+11.09	-1.63	-11.00	18 37 12.09	53 12 32.2
18 37 46.8	9.3	38 12.62	37 43.2	30 57.10	-22.11	+0 0.01	+11.68	-1.62	-11.10	18 38 12.27	53 53 39.4
18 39 9.9	8.5	39 37.16	39 16.7	23 27.10	-15.74	+0 0.03	+11.88	-1.64	-11.10	18 39 36.87	53 1 16.1
18 39 49.8	9.0	40 14.30	40 36.1	41 23.10	+16.07	-0 0.01	+12.71	-1.62	-11.20	18 40 13.88	54 43 52.7
18 41 25.8	9.2	41 57.06	41 37.0	13 34.70	-16.08	+0 0.08	+ 8.96	-1.68	-11.00	18 41 56.90	51 11 5.6
18 43 5.2	9.2	43 30.64	43 7.2	56 41.40	-18.20	+0 0.05	+10.29	-1.67	-11.10	18 43 30.38	52 27 58.1
18 44 4.3	7.8	44 29.70	44 14.4	43 22.40	-11.57	+0 0.01	+11.62	-1.66	-11.20	18 44 29.34	53 41 25.0
18 45 54.4	9.0	46 20.64	46 2.1	53 23.90	-14.36	+0 0.05	+10.38	-1.68	-11.10	18 46 20.37	52 31 19.8
18 46 53.1	8.8	47 23.74	47 3.2	13 7.50	-16.40	+0 0.08	+ 8.96	-1.71	-11.10	18 47 23.55	51 11 32.8
18 47 58.4	8.2	48 26.66	48 14.2	44 5.45	- 9.89	+0 0.06	+ 9.53	-1.71	-11.10	18 48 26.43	51 40 42.0
18 48 57.2	7.9	49 25.72	49 10.4	30 23.40	-12.04	+0 0.06	+ 9.78	-1.71	-11.20	18 49 25.48	51 54 22.2
18 50 46.9	8.7	51 17.40	50 52.7	59 13.65	-20.08	+0 0.09	+ 8.08	-1.74	-11.10	18 51 17.25	50 25 22.4
18 52 55.7	9.0	53 23.84	53 9.2	21 17.35	-10.94	+0 0.00	+12.03	-1.71	-11.40	18 53 23.41	54 3 31.7

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
18 54 29.6	9.0	54 58.78	54 36.9	43 27.60	-16.16	-0 0.02	+12.66	-1.70	-11.40	18 54 58.30	54 41 17.0
18 55 41.7	8.0	56 7.12	55 51.5	43 1.20	-11.51	-0 0.02	+12.72	-1.71	-11.40	18 56 6.63	54 41 48.2
18 57 1.6	8.2	57 27.62	57 51.8	56 35.05	+17.95	-0 0.01	+12.41	-1.71	-11.40	18 57 27.16	54 28 43.6
18 59 25.5	9.0	59 50.02	59 24.5	55 44.50	-18.91	-0 0.01	+12.42	-1.73	-11.50	18 59 49.54	54 28 57.4
19 0 48.8	7.5	1 15.12	0 54.4	12 37.80	-15.45	-0 0.01	+12.13	-1.75	-11.50	19 1 14.64	54 12 7.4
19 2 2.4	9.5	2 31.30	2 10.6	4 34.45	-16.15	+0 0.04	+10.15	-1.77	-11.40	19 2 30.97	52 20 8.3
19 3 34.5	7.8	4 4.18	3 45.0	57 4.85	-15.27	+0 0.05	+ 9.27	-1.79	-11.30	19 4 3.90	51 27 38.1
19 4 28.7	7.9	4 56.90	4 41.4	37 45.05	-11.97	+0 0.02	+10.71	-1.78	-11.50	19 4 56.52	52 47 2.5
19 6 23.2	8.8	6 53.66	6 40.8	12 52.40	-10.32	+0 0.06	+ 9.04	-1.81	-11.40	19 6 53.39	51 11 55.4
19 7 43.1	7.7	8 12.84	7 50.9	35 44.55	-17.28	+0 0.04	+ 9.63	-1.81	-11.40	19 8 12.52	51 48 57.0
19 9 36.0	9.4	10 3.96	9 49.2	19 7.45	-11.34	+0 0.01	+11.03	-1.82	-11.50	19 10 3.52	53 5 41.5
19 11 55.8	9.0	12 22.80	11 58.1	29 10.85	-18.56	-0 0.01	+11.75	-1.82	-11.60	19 12 22.30	53 55 31.7
19 13 47.0	4.0	14 13.28	13 38.6	16 15.10	-26.56	+0 0.01	+10.82	-1.83	-11.60	19 14 12.84	53 8 18.7
19 14 58.0	8.5	15 24.48	15 5.1	11 7.00	-14.83	+0 0.00	+11.15	-1.84	-11.60	19 15 24.02	53 13 38.9
19 16 10.8	9.1	16 42.44	16 21.2	18 33.05	-16.99	+0 0.05	+ 9.87	-1.86	-11.50	19 16 42.14	51 6 9.6
19 17 29.6	9.2	17 58.78	17 40.4	42 27.25	-14.23	+0 0.01	+10.62	-1.85	-11.60	19 17 58.36	52 42 19.0
19 19 7.4	8.3	19 36.94	19 12.6	36 22.60	-18.75	+0 0.01	+10.67	-1.86	-11.60	19 19 36.51	52 48 19.3
19 19 49.6	8.9	20 19.54	20 7.0	23 39.30	- 9.60	+0 0.00	+10.97	-1.86	-11.70	19 20 19.08	53 1 12.0
19 21 21.2	9.5	21 50.90	21 22.0	30 17.00	-22.24	+0 0.00	+10.72	-1.87	-11.70	19 21 50.45	52 54 21.5
19 22 59.6	9.0	23 31.18	23 1.5	14 34.35	-23.77	+0 0.04	+ 8.83	-1.89	-11.60	19 23 30.85	51 10 1.0
ZONE 333, SEPTEMBER 7, 1874.											
18 21 58.1	9.0	22 31.36	22 8.3	6 50.60	-18.83	-0 3.15	+ 8.02	-1.44	-11.10	18 22 28.24	50 17 43.3
18 23 19.0	9.6	23 53.26	23 26.6	21 6.15	-19.99	-0 3.24	+12.03	-1.38	-11.40	18 23 49.88	54 3 30.4
18 24 34.1	7.7	25 5.48	24 47.1	27 18.00	-14.79	-0 3.17	+ 8.77	-1.44	-11.30	18 25 2.30	50 57 20.7
18 26 23.5	9.2	26 52.12	26 23.6	32 41.05	-21.45	-0 3.24	+11.76	-1.40	-11.50	18 26 48.73	53 51 54.0
18 27 49.6	9.1	28 20.18	27 52.4	20 8.70	-21.31	-0 3.22	+10.97	-1.42	-11.50	18 28 16.84	53 4 25.8
18 28 42.3	9.0	29 9.98	28 58.5	42 46.35	- 8.48	-0 3.26	+12.86	-1.40	-11.60	18 29 6.52	54 42 2.8
18 30 49.2	8.2	31 23.30	30 58.2	33 25.55	-20.66	-0 3.15	+ 7.66	-1.49	-11.40	18 31 20.16	49 51 6.6
18 32 44.2	9.0	33 13.26	32 49.1	12 0.65	-17.69	-0 3.27	+13.31	-1.41	-11.70	18 33 9.75	55 12 40.0
18 34 17.8	8.1	34 46.90	34 23.1	19 58.55	-18.25	-0 3.23	+10.99	-1.46	-11.60	18 34 43.52	53 4 39.5
18 35 42.7	7.5	36 8.42	35 45.0	16 50.90	-17.07	-0 3.27	+13.20	-1.43	-11.80	18 36 4.90	55 7 50.4
18 38 6.3	7.8	38 33.84	38 5.3	36 13.85	-20.96	-0 3.27	+12.81	-1.45	-11.80	18 38 30.32	54 48 23.4
18 41 23.5	8.2	41 52.02	41 26.6	16 54.60	-18.53	-0 3.27	+13.24	-1.46	-11.90	18 41 48.47	55 7 45.7
18 42 18.3	8.9	42 52.30	42 33.0	32 37.50	-15.85	-0 3.16	+ 7.74	-1.55	-11.70	18 42 49.10	49 52 0.3
18 45 11.1	8.8	45 45.34	45 21.0	28 2.75	-19.96	-0 3.16	+ 7.69	-1.55	-11.70	18 45 42.14	49 56 31.1
18 46 35.7	9.0	47 3.70	46 41.1	22 2.45	-16.53	-0 3.28	+13.14	-1.49	-12.10	18 47 0.13	55 2 40.0
18 47 18.9	6.5	47 47.52	47 32.1	15 34.05	-11.51	-0 3.26	+12.25	-1.51	-12.00	18 47 44.01	54 9 12.7
18 48 28.8	8.7	48 58.08	48 36.8	27 28.85	-15.61	-0 3.28	+13.09	-1.51	-12.10	18 48 54.50	54 57 14.6
18 49 12.3	9.0	49 42.94	49 29.5	19 39.90	- 9.79	-0 3.28	+13.26	-1.51	-12.10	18 49 39.35	55 5 9.6
18 50 8.8	8.2	50 41.54	50 17.9	29 11.95	-19.39	-0 3.17	+ 7.69	-1.60	-11.90	18 50 38.28	49 55 22.7
18 51 33.8	8.5	52 1.88	51 30.0	28 32.00	-23.39	-0 3.28	+12.90	-1.54	-12.20	18 51 58.28	54 56 3.7
18 52 57.8	9.3	53 26.84	52 53.0	57 6.50	-25.08	-0 3.27	+12.34	-1.54	-12.20	18 53 23.28	54 27 27.0
18 54 5.1	8.5	54 35.62	54 17.6	38 42.95	-13.58	-0 3.26	+11.78	-1.56	-12.20	18 54 32.10	53 46 1.6
18 55 7.3	9.2	55 37.36	55 18.9	3 41.25	-14.10	-0 3.25	+11.36	-1.57	-12.20	18 55 33.87	53 21 2.5
18 56 19.5	8.5	56 48.80	56 29.2	45 0.20	-14.47	-0 3.27	+12.74	-1.56	-12.30	18 56 45.21	54 39 44.5
18 57 10.1	8.4	57 38.26	57 25.5	25 43.80	- 9.37	-0 3.29	+13.19	-1.55	-12.30	18 57 34.64	54 59 6.6
18 58 8.2	8.3	58 38.00	58 19.8	27 57.15	-13.67	-0 3.27	+12.07	-1.58	-12.20	18 58 34.45	53 56 48.0
19 1 43.8	8.8	2 13.56	1 49.0	13 44.85	-17.93	-0 3.29	+13.26	-1.58	-12.40	19 2 9.91	55 10 57.3
19 3 58.4	8.2	4 28.24	4 0.0	13 2.50	-21.06	-0 3.27	+12.13	-1.61	-12.40	19 4 24.65	54 11 35.6
19 5 17.3	8.8	5 47.08	5 20.2	45 57.05	-19.87	-0 3.28	+12.66	-1.61	-12.40	19 5 43.45	54 38 42.9
19 6 9.3	8.5	6 38.26	6 25.5	48 2.40	- 9.69	-0 3.26	+11.67	-1.63	-12.40	19 6 34.70	53 36 46.8
19 7 29.6	9.0	8 1.34	7 35.9	50 48.75	-19.25	-0 3.26	+11.53	-1.64	-12.40	19 7 57.78	53 33 50.8

R. A. 1855.0. According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
19 9 23.4	7.5	9 52.20	9 26.7	18 48.25	-18.62	-0 3.29	+13.17	-1.63	-12.50	19 9 48.52	55 5 53.7
19 10 13.9	9.5	10 44.50	10 29.0	35 27.95	-11.68	-0 3.28	+11.89	-1.65	-12.50	19 10 40.90	53 49 19.7
19 12 47.0	8.1	13 16.16	12 55.5	40 19.00	-15.25	-0 3.30	+12.86	-1.65	-12.60	19 13 12.49	54 44 26.2
19 13 45.7	7.8	14 14.10	13 56.0	14 16.15	-13.19	-0 3.30	+13.34	-1.65	-12.60	19 14 10.40	55 10 31.6
19 14 45.2	7.7	15 18.16	15 2.4	24 49.05	-12.96	-0 3.19	+ 7.76	-1.73	-12.30	19 15 14.80	49 59 53.8
19 15 42.2	8.1	16 11.82	15 51.7	59 23.20	-15.29	-0 3.27	+11.41	-1.69	-12.50	19 16 8.23	53 25 20.8
19 16 47.3	8.8	17 18.78	17 3.2	6 0.80	-11.90	-0 3.26	+11.35	-1.70	-12.60	19 17 15.20	53 18 46.5
19 17 47.8	8.3	18 17.68	18 0.7	21 42.60	-12.74	-0 3.28	+12.12	-1.69	-12.70	19 18 14.05	54 3 4.6
19 19 25.2	8.6	19 55.42	19 33.4	2 59.30	-16.76	-0 3.27	+11.34	-1.71	-12.60	19 19 51.82	53 21 43.4
19 20 26.7	9.0	21 1.14	21 17.9	24 32.55	+13.29	-0 3.19	+ 7.78	-1.76	-12.50	19 20 57.77	50 0 36.8
19 20 44.2	7.0	21 19.44	20 32.6	24 32.55	-38.40	-0 3.19	+ 7.27	-1.76	-12.50	19 21 16.07	49 59 44.6
19 21 48.7	7.4	22 18.14	21 57.6	18 21.00	-14.97	-0 3.30	+13.26	-1.70	-12.70	19 22 14.42	55 6 25.5
19 22 50.9	8.6	23 26.20	23 47.1	31 5.05	+17.19	-0 3.19	+ 7.76	-1.76	-12.60	19 23 22.84	49 54 8.3
19 22 56.4	6.2	23 32.05	23 0.0	31 5.05	-26.56	-0 3.19	+ 7.60	-1.76	-12.60	19 23 28.69	49 53 24.4
19 24 19.5	8.7	24 48.66	24 31.1	18 30.60	-12.85	-0 3.30	+13.28	-1.72	-12.80	19 24 44.92	55 6 18.1
ZONE 334, SEPTEMBER 9, 1874.											
18 21 58.1	...	22 33.30	22 22.6	7 3.20	- 8.81	-0 5.09	+ 8.14	-1.38	-11.30	18 22 28.30	50 17 40.6
18 24 34.1	7.5	25 7.30	24 40.9	27 12.55	-21.22	-0 5.09	+ 8.70	-1.38	-11.50	18 25 2.26	50 57 19.4
18 26 23.5	9.2	26 53.98	26 30.3	32 45.55	-17.84	-0 5.16	+11.84	-1.33	-11.70	18 26 48.74	53 51 52.8
18 27 49.6	9.0	28 22.06	28 2.1	20 14.10	-15.33	-0 5.14	+11.10	-1.35	-11.70	18 28 16.87	53 4 26.2
18 28 42.3	9.0	29 11.84	28 47.9	42 37.35	-17.63	-0 5.18	+12.78	-1.33	-11.80	18 29 6.53	54 42 2.3
18 30 49.2	8.5	31 25.12	30 56.1	33 22.70	-23.87	-0 5.08	+ 7.62	-1.43	-11.60	18 31 20.11	49 51 5.9
18 32 44.2	9.0	33 15.16	32 47.7	11 59.35	-20.02	-0 5.18	+13.30	-1.34	-11.90	18 33 9.81	55 12 38.7
18 34 17.8	8.4	34 48.76	34 27.6	20 1.70	-16.25	-0 5.15	+11.09	-1.39	-11.80	18 34 43.53	53 4 38.1
18 35 42.7	7.0	36 10.40	35 48.6	16 51.95	-15.91	-0 5.19	+13.26	-1.36	-12.00	18 36 5.03	55 7 50.3
18 38 6.3	8.4	38 35.90	38 2.0	36 10.50	-24.93	-0 5.18	+12.76	-1.38	-12.10	18 38 30.54	54 48 22.3
18 41 23.5	9.2	41 54.04	41 25.3	16 52.05	-20.94	-0 5.19	+13.21	-1.39	-12.20	18 41 48.64	55 7 45.4
18 42 18.3	8.7	42 54.22	42 39.1	32 40.90	-12.42	-0 5.09	+ 7.80	-1.49	-11.90	18 42 49.15	49 52 0.1
18 45 11.1	9.2	45 47.16	45 24.7	28 4.20	-18.48	-0 5.11	+ 7.73	-1.49	-11.90	18 45 42.07	49 56 30.9
18 46 35.7	9.0	47 5.56	46 44.5	22 2.95	-15.43	-0 5.19	+13.21	-1.45	-12.30	18 47 0.12	55 2 40.4
18 47 18.9	6.2	47 49.44	47 34.6	15 34.05	-11.06	-0 5.18	+12.29	-1.45	-12.20	18 47 44.07	54 9 12.9
18 48 28.8	9.0	49 0.08	48 42.1	27 31.90	-13.20	-0 5.19	+13.17	-1.44	-12.30	18 48 54.66	54 57 13.8
18 49 12.3	8.9	49 44.88	49 27.1	19 37.30	-13.00	-0 5.20	+13.28	-1.44	-12.40	18 49 39.44	55 5 8.6
18 50 8.8	8.1	50 43.30	50 27.6	29 18.55	-12.90	-0 5.10	+ 7.79	-1.54	-12.10	18 50 38.17	49 55 22.4
18 51 33.8	8.8	52 3.72	51 41.5	28 39.45	-16.28	-0 5.20	+13.08	-1.48	-12.40	18 51 58.26	54 56 3.2
18 52 57.8	9.4	53 28.73	53 5.7	57 14.55	-17.06	-0 5.19	+12.55	-1.47	-12.40	18 53 23.32	54 27 26.9
18 54 5.1	8.2	54 37.44	54 25.7	38 47.50	- 8.83	-0 5.18	+11.85	-1.50	-12.40	18 54 32.06	53 46 1.6
18 55 7.3	9.3	55 39.36	55 25.6	3 46.05	-10.51	-0 5.17	+11.41	-1.51	-12.40	18 55 34.01	53 21 1.0
18 56 19.5	7.7	56 50.66	56 29.4	44 59.10	-15.72	-0 5.20	+12.77	-1.49	-12.60	18 56 45.21	54 39 44.0
18 57 10.1	8.5	57 40.10	57 27.6	25 45.10	- 9.15	-0 5.20	+13.25	-1.48	-12.60	18 57 34.64	54 59 5.1
18 58 8.2	8.5	58 39.94	58 23.6	27 59.10	-12.24	-0 5.19	+12.11	-1.52	-12.50	18 58 34.53	53 56 47.1
19 1 43.8	8.7	2 15.46	1 50.7	13 44.75	-18.07	-0 5.20	+13.31	-1.51	-12.70	19 2 9.97	55 10 56.9
19 3 58.4	8.5	4 30.22	4 7.3	13 7.15	-17.10	-0 5.19	+12.23	-1.55	-12.70	19 4 24.77	54 11 34.6
19 5 17.3	9.0	5 49.06	5 28.5	46 2.45	-15.21	-0 5.19	+12.79	-1.55	-12.70	19 5 43.58	54 38 41.9
19 6 9.3	8.8	6 40.28	6 26.1	48 2.35	-10.75	-0 5.19	+11.70	-1.57	-12.70	19 6 34.85	53 36 45.4
19 6 43.7	9.5	7 16.22	7 27.9	53 35.30	+ 8.87	-0 5.18	+11.67	-1.58	-12.70	19 7 10.80	53 31 32.1
19 7 47.7	9.2	8 20.24	8 8.4	58 57.45	- 8.97	-0 5.19	+11.52	-1.59	-12.70	19 8 14.81	53 25 52.0
19 9 23.4	8.0	9 54.10	9 36.9	18 55.40	-12.56	-0 5.22	+13.31	-1.56	-12.80	19 9 48.56	55 5 52.3
19 10 13.9	9.3	10 46.52	10 33.1	35 31.15	-10.10	-0 5.19	+11.94	-1.59	-12.80	19 10 41.07	53 49 17.7
19 10 56.4	8.8	11 27.04	11 14.9	14 38.80	- 8.82	-0 5.21	+13.41	-1.58	-12.90	19 11 21.49	55 10 12.8
19 12 47.0	8.2	13 18.10	12 49.7	40 13.00	-20.92	-0 5.22	+12.82	-1.59	-12.90	19 13 12.57	54 44 26.1
19 13 45.7	8.4	14 16.04	13 56.3	14 16.40	-14.36	-0 5.21	+13.37	-1.59	-12.90	19 14 10.49	55 10 29.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
19 14 45.2	7.0	15 20.12	15 4.9	24 48.55	-12.47	-0 5.13	+ 7.79	-1.68	-12.70	19 15 14.87	49 59 54.3
19 15 42.2	8.3	16 13.70	15 56.6	59 26.65	-13.01	-0 5.19	+11.46	-1.63	-12.90	19 16 8.25	53 25 19.2
19 16 47.3	9.1	17 20.70	17 3.3	5 59.95	-13.27	-0 5.19	+11.37	-1.64	-12.90	19 17 15.25	53 18 45.6
19 17 47.8	8.4	18 19.68	18 5.7	21 44.75	-10.49	-0 5.19	+12.18	-1.63	-13.00	19 18 14.20	54 3 4.4
19 19 25.2	8.8	19 57.48	19 34.5	2 57.80	-17.52	-0 5.20	+11.37	-1.65	-13.00	19 19 52.01	53 21 43.7
19 20 26.7	9.3	21 3.04	21 38.2	24 46.20	+29.15	-0 5.13	+ 7.54	-1.71	-12.80	19 20 57.78	50 0 38.4
19 20 44.2	7.2	21 21.30	20 51.8	24 46.20	-24.29	-0 5.13	+ 7.64	-1.71	-12.80	19 21 16.04	49 59 45.0
19 21 48.7	7.8	22 20.06	22 7.8	18 27.50	- 8.98	-0 5.23	+13.37	-1.64	-13.10	19 22 14.47	55 6 24.6
19 22 50.9	8.6	23 28.10	23 57.0	31 11.55	+23.76	-0 5.13	+ 7.67	-1.71	-12.90	19 23 22.85	49 54 7.9
19 22 56.4	7.5	23 33.92	23 9.8	31 11.55	-19.82	-0 5.13	+ 7.75	-1.71	-12.90	19 23 28.67	49 53 24.4
19 24 19.5	8.8	24 50.58	24 28.2	18 26.30	-16.36	-0 5.23	+13.29	-1.65	-13.10	19 24 44.98	55 6 18.5
ZONE 335, SEPTEMBER 12, 1874.											
18 46 33.7	9.2	47 8.24	46 39.9	6 2.25	-21.51	-0 8.10	+11.36	-1.36	-12.60	18 47 0.10	53 18 34.7
18 47 28.5	8.8	48 3.02	47 43.4	42 32.20	-23.95	-0 8.09	+10.80	-1.38	-12.50	18 47 54.91	52 42 2.0
18 48 21.4	5.8	48 55.04	48 28.8	35 44.90	-20.15	-0 8.09	+10.87	-1.38	-12.60	18 48 46.92	52 48 53.1
18 49 0.9	9.2	49 35.58	49 25.9	56 4.00	- 7.34	-0 8.11	+11.73	-1.37	-12.70	18 49 27.41	53 28 47.6
18 50 19.3	9.2	50 54.38	50 23.9	57 31.50	-23.11	-0 8.11	+11.48	-1.38	-12.70	18 50 46.20	53 27 4.2
18 51 34.0	8.8	52 9.84	51 45.6	24 12.55	-18.95	-0 8.10	+11.09	-1.40	-12.70	18 52 1.68	53 0 27.1
18 53 37.0	7.8	54 13.20	53 51.5	51 23.75	-17.16	-0 8.05	+ 9.53	-1.45	-12.60	18 54 5.14	51 33 16.4
18 55 8.1	8.7	55 44.08	55 16.8	24 11.25	-21.38	-0 8.06	+ 9.97	-1.44	-12.60	18 55 35.99	52 0 25.2
18 55 46.1	9.1	56 22.46	56 14.6	30 15.15	- 6.06	-0 8.10	+11.16	-1.42	-12.80	18 56 14.30	52 54 37.7
18 57 11.6	8.5	57 47.32	57 19.2	19 0.05	-21.96	-0 8.07	+10.04	-1.45	-12.80	18 57 39.21	52 5 35.9
18 58 42.3	7.0	59 18.82	58 56.0	19 50.65	-17.83	-0 8.07	+10.09	-1.46	-12.80	18 59 10.70	52 4 49.6
19 0 19.5	9.0	0 55.84	0 22.1	28 43.70	-25.85	-0 8.10	+10.87	-1.45	-12.90	19 0 47.65	52 55 49.3
19 1 24.8	8.3	2 1.34	1 36.8	50 25.20	-18.95	-0 8.07	+10.66	-1.46	-12.90	19 1 53.20	52 34 14.6
19 3 10.7	8.8	3 46.28	3 19.2	47 32.55	-20.45	-0 8.12	+11.71	-1.45	-13.00	19 3 38.04	53 37 6.9
19 4 32.3	9.4	5 8.14	4 43.2	58 15.60	-18.87	-0 8.13	+11.54	-1.47	-13.10	19 4 59.88	53 26 25.2
19 5 26.8	9.0	6 2.02	5 42.2	24 47.95	-14.81	-0 8.14	+12.17	-1.46	-13.10	19 5 53.73	53 59 57.6
19 6 43.7	9.2	7 19.10	7 1.7	53 12.75	-13.16	-0 8.13	+11.73	-1.48	-13.10	19 7 10.83	53 31 34.2
19 7 47.7	9.0	8 22.86	8 3.0	58 54.30	-15.08	-0 8.13	+11.59	-1.49	-13.20	19 8 14.59	53 25 50.6
19 9 41.7	9.3	10 17.36	9 51.7	43 51.25	-19.37	-0 8.13	+11.77	-1.49	-13.20	19 10 9.08	53 40 49.6
19 11 8.0	8.6	11 45.40	11 20.2	29 2.65	-20.20	-0 8.06	+ 8.80	-1.55	-13.10	19 11 37.29	50 55 34.7
19 12 19.2	9.4	12 58.38	12 31.5	45 27.30	-21.70	-0 8.06	+ 8.50	-1.56	-13.10	19 12 50.28	50 39 8.3
19 13 1.6	8.7	13 40.74	13 31.0	59 27.65	- 7.86	-0 8.06	+ 8.37	-1.58	-13.10	19 13 32.64	50 25 21.7
19 14 28.8	9.0	15 7.36	14 46.2	27 36.40	-16.99	-0 8.06	+ 8.86	-1.57	-13.20	19 14 59.24	50 57 4.4
19 16 12.1	8.8	16 49.96	16 19.3	43 9.20	-24.21	-0 8.09	+ 9.55	-1.57	-13.20	19 16 41.77	51 41 25.2
19 17 29.6	9.1	18 6.76	17 34.0	42 17.05	-25.28	-0 8.12	+10.65	-1.56	-13.40	19 17 58.50	52 42 17.3
19 19 7.4	7.0	19 44.86	19 12.1	36 16.20	-25.22	-0 8.12	+10.78	-1.57	-13.40	19 19 36.59	52 48 18.4
19 19 49.6	8.0	20 27.46	20 15.4	23 39.50	- 9.26	-0 8.13	+11.22	-1.57	-13.40	19 20 19.16	53 1 11.6
19 21 21.2	9.3	21 58.88	21 28.1	30 15.15	-23.63	-0 8.14	+10.93	-1.58	-13.50	19 21 50.58	52 54 21.3
19 22 30.5	8.9	23 11.20	22 58.2	14 25.55	-10.37	-0 8.07	+ 9.17	-1.62	-13.40	19 23 3.03	51 10 22.7
19 22 59.6	8.7	23 39.20	23 46.9	15 5.45	+ 6.14	-0 8.07	+ 9.19	-1.62	-13.40	19 23 31.03	51 9 59.3
19 24 52.4	8.5	25 30.76	25 4.1	58 18.15	-21.27	-0 8.09	+ 9.34	-1.63	-13.50	19 25 22.55	51 26 19.4
19 26 2.9	3.0	26 41.50	26 21.0	56 52.20	-16.25	-0 8.09	+ 9.46	-1.63	-13.50	19 26 33.29	51 27 50.6
19 27 5.5	9.5	27 43.44	27 22.5	1 2.05	-16.22	-0 8.10	+10.51	-1.62	-13.60	19 27 35.18	52 23 41.8
19 28 9.8	9.3	28 47.64	28 39.7	48 17.30	- 6.10	-0 8.10	+10.83	-1.63	-13.60	19 28 39.36	52 36 37.1
19 29 38.6	9.3	30 17.36	29 52.6	51 54.10	-19.19	-0 8.10	+10.63	-1.64	-13.70	19 30 9.08	52 32 47.0
19 29 47.2	8.9	30 25.18	29 54.2	51 54.10	-23.98	-0 8.10	+10.54	-1.64	-13.70	19 30 16.90	52 32 42.1
19 31 24.0	8.4	32 1.68	31 37.3	27 23.85	-18.71	-0 8.13	+11.07	-1.64	-13.70	19 31 53.35	52 57 18.3
19 34 26.6	9.2	35 7.24	34 42.0	33 55.60	-20.24	-0 8.08	+ 8.69	-1.69	-13.60	19 34 59.04	50 50 43.0
19 35 15.2	6.6	35 54.98	35 38.8	35 43.15	-13.02	-0 8.08	+ 8.80	-1.70	-13.70	19 35 46.77	50 49 2.8
19 37 52.7	9.0	38 33.38	38 9.4	28 33.10	-19.24	-0 8.08	+ 8.81	-1.71	-13.70	19 38 25.16	50 56 6.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
19 38 53.2	8.5	39 34.32	39 8.3	20 47.20	-21.24	-0 8.07	+ 7.88	-1.73	-13.70	19 39 26.14	50 3 49.8
19 40 8.5	9.2	40 48.90	40 17.8	49 25.45	-25.18	-0 8.08	+ 8.34	-1.73	-13.80	19 40 40.69	50 35 8.1
19 40 12.2	7.3	40 53.22	41 19.3	48 36.99	-27.39	-0 8.08	+ 8.29	-1.73	-13.80	19 40 45.01	50 35 54.3
19 41 33.1	8.5	42 14.04	42 2.0	57 28.10	- 9.72	-0 8.09	+ 8.43	-1.74	-13.80	19 42 5.82	50 27 21.0
19 42 45.2	8.4	43 26.17	42 58.8	41 45.50	-22.07	-0 8.09	+ 8.57	-1.74	-13.80	19 43 17.94	50 42 51.6
ZONE 336, SEPTEMBER 14, 1874.											
18 46 33.7	9.3	47 8.90	46 49.9	6 8.45	-14.44	-0 8.75	+11.43	-1.29	-12.80	18 47 0.18	53 18 34.7
18 47 28.5	8.9	48 3.52	47 43.3	42 39.80	-15.57	-0 8.74	+10.75	-1.31	-12.80	18 47 54.83	52 42 1.6
18 48 21.4	6.2	48 55.82	48 39.1	35 52.05	-12.84	-0 8.74	+10.91	-1.31	-12.80	18 48 47.12	52 48 52.4
18 49 0.9	9.5	49 35.98	49 28.2	56 4.20	- 5.90	-0 8.76	+11.68	-1.30	-12.90	18 49 27.23	53 28 47.9
18 50 19.3	9.2	50 55.02	50 24.2	57 30.60	-23.34	-0 8.76	+11.41	-1.31	-12.90	18 50 46.26	53 27 3.9
18 51 34.0	8.8	52 10.38	51 43.6	24 9.95	-20.51	-0 8.75	+10.99	-1.33	-12.90	18 52 1.64	53 0 27.0
18 53 37.0	8.0	54 13.76	53 42.3	51 16.10	-24.91	-0 8.71	+ 9.35	-1.38	-12.80	18 54 5.11	51 33 15.1
18 55 8.1	8.5	55 44.68	55 14.8	24 7.80	-23.41	-0 8.72	+ 9.86	-1.37	-12.80	18 55 36.00	52 0 25.6
18 55 46.1	8.9	56 23.26	56 53.4	30 42.95	+23.09	-0 8.74	+10.87	-1.36	-13.00	18 56 14.52	52 54 37.8
18 57 11.6	8.4	57 47.80	57 28.1	19 4.75	-15.40	-0 8.72	+10.08	-1.38	-13.00	18 57 39.11	52 5 36.8
18 58 42.3	7.0	59 19.38	58 50.3	19 44.35	-22.75	-0 8.72	+ 9.95	-1.39	-13.00	18 59 10.68	52 4 49.9
19 0 19.5	8.8	0 56.36	0 32.1	28 49.55	-18.64	-0 8.74	+10.96	-1.39	-13.20	19 0 47.59	52 55 49.7
19 1 24.8	8.1	2 1.90	1 38.8	50 24.40	-17.87	-0 8.72	+10.61	-1.40	-13.20	19 1 53.17	52 34 15.4
19 3 10.7	8.7	3 46.86	3 19.0	47 30.85	-21.06	-0 8.76	+11.64	-1.39	-13.30	19 3 38.04	53 37 6.8
19 4 32.3	9.1	5 8.74	4 48.6	58 18.15	-15.23	-0 8.76	+11.54	-1.40	-13.30	19 4 59.92	53 26 25.4
19 5 26.8	9.0	6 2.60	5 49.4	24 50.65	- 9.87	-0 8.77	+12.15	-1.39	-13.40	19 5 53.75	53 59 58.8
19 6 43.7	9.4	7 19.80	7 8.5	53 15.25	- 8.54	-0 8.76	+11.71	-1.41	-13.40	19 7 10.97	53 31 35.2
19 7 47.7	9.5	8 23.54	8 15.9	59 1.45	- 5.76	-0 8.76	+11.61	-1.42	-13.40	19 8 14.71	53 25 51.8
19 9 41.7	9.0	10 18.00	9 49.3	43 47.15	-21.62	-0 8.76	+11.66	-1.43	-13.50	19 10 9.15	53 40 50.3
19 12 19.2	9.8	12 58.96	12 44.1	45 34.75	-12.02	-0 8.68	+ 8.59	-1.51	-13.30	19 12 50.29	50 39 9.7
19 13 1.6	9.1	13 41.26	13 57.3	59 47.70	+12.97	-0 8.68	+ 8.28	-1.52	-13.30	19 13 32.60	50 25 21.5
19 14 28.8	9.2	15 7.92	14 47.1	27 34.60	-16.67	-0 8.70	+ 8.83	-1.51	-13.40	19 14 59.22	50 57 5.5
19 16 12.1	8.8	16 50.62	16 23.6	43 11.25	-21.29	-0 8.72	+ 9.57	-1.51	-13.50	19 16 41.86	51 41 25.0
19 17 29.6	9.0	18 7.10	17 47.4	42 23.45	-15.18	-0 8.74	+10.77	-1.50	-13.60	19 17 58.28	52 42 20.1
19 19 7.4	8.0	19 45.36	19 19.5	36 18.90	-19.92	-0 8.74	+10.81	-1.51	-13.60	19 19 36.53	52 48 20.1
19 19 49.6	8.5	20 27.92	20 17.1	23 38.35	- 8.27	-0 8.75	+11.16	-1.53	-13.70	19 20 19.04	53 1 12.6
19 21 21.2	9.3	21 59.30	21 40.1	30 22.40	-14.57	-0 8.75	+11.02	-1.52	-13.80	19 21 50.45	52 54 22.2
19 22 30.5	9.2	23 11.64	22 59.2	14 24.35	- 9.89	-0 8.70	+ 8.77	-1.56	-13.70	19 23 2.90	51 10 22.9
19 22 59.6	9.0	23 39.72	23 1.1	14 24.50	-30.78	-0 8.70	+ 8.77	-1.56	-13.70	19 23 30.98	51 10 1.8
19 24 52.4	8.2	25 31.26	24 56.1	58 9.20	-27.91	-0 8.71	+ 9.15	-1.57	-13.70	19 25 22.49	51 26 20.6
19 26 2.9	4.0	26 42.06	26 16.3	56 45.45	-20.45	-0 8.71	+ 9.34	-1.57	-13.80	19 26 33.29	51 27 51.9
19 27 5.5	9.1	27 43.84	27 22.2	0 58.65	-16.77	-0 8.72	+10.43	-1.56	-13.90	19 27 35.02	52 23 43.5
19 28 9.8	9.0	28 47.92	28 29.5	48 7.75	-14.21	-0 8.72	+10.71	-1.57	-13.90	19 28 39.08	52 36 37.3
19 29 38.6	9.3	30 17.94	29 53.8	51 52.80	-18.65	-0 8.72	+10.57	-1.58	-14.00	19 30 9.10	52 32 47.7
19 29 47.2	9.2	30 25.70	29 56.1	51 52.80	-22.90	-0 8.72	+10.48	-1.58	-14.00	19 30 16.86	52 32 43.4
19 31 24.0	8.5	32 2.42	31 33.9	27 18.50	-21.85	-0 8.74	+10.94	-1.58	-14.00	19 31 53.54	52 57 19.3
19 34 26.6	9.5	35 7.70	34 41.5	33 52.25	-21.05	-0 8.70	+ 8.63	-1.64	-13.90	19 34 58.93	50 50 44.4
19 35 15.2	7.8	35 55.62	35 43.0	35 44.20	-10.13	-0 8.70	+ 8.77	-1.64	-14.00	19 35 46.85	50 49 3.5
19 37 52.7	9.3	38 34.04	38 6.8	28 28.80	-21.81	-0 8.70	+ 8.73	-1.66	-14.10	19 38 25.25	50 56 7.3
19 38 53.2	9.0	39 34.98	39 13.3	20 49.20	-17.72	-0 8.68	+ 7.88	-1.67	-14.00	19 39 26.25	50 3 50.3
19 40 8.5	9.3	40 49.46	40 23.6	49 25.60	-20.92	-0 8.66	+ 8.37	-1.68	-14.10	19 40 40.72	50 35 11.2
19 40 12.2	7.5	40 53.64	41 23.1	48 37.09	-24.64	-0 8.68	+ 8.31	-1.68	-14.10	19 40 44.88	50 35 55.9
19 41 33.1	8.8	42 14.46	41 54.2	57 17.80	-16.45	-0 8.68	+ 8.31	-1.69	-14.10	19 42 5.70	50 27 23.5
19 42 45.2	8.8	43 26.80	43 6.0	41 48.50	-16.76	-0 8.70	+ 8.57	-1.69	-14.20	19 43 18.01	50 42 52.8
19 45 11.6	9.1	45 51.50	45 28.4	25 0.45	-18.09	-0 8.72	+ 9.96	-1.68	-14.00	19 45 42.64	51 59 41.2
19 46 4.0	9.4	46 43.76	46 26.1	41 27.80	-13.95	-0 8.71	+ 9.72	-1.70	-14.00	19 46 34.91	51 43 17.9

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
19 47 20.5	9.4	48 0.86	47 35.1	46 26.05	-20.38	-0 8.71	+ 9.55	-1.70	-14.00	19 47 52.02	51 38 13.1
19 47 27.0	9.1	48 8.64	47 52.1	46 26.05	-13.03	-0 8.71	+ 9.66	-1.70	-14.00	19 47 59.80	51 38 20.6
19 48 18.3	7.8	48 58.98	48 48.4	44 30.05	- 8.36	-0 8.71	+ 9.71	-1.71	-14.00	19 48 50.13	51 40 21.4
ZONE 337, OCTOBER 3, 1874.											
20 49 10.7	6.8	49 57.50	50 8.9	22 51.55	+ 8.51	-0 13.58	+12.44	-1.40	-19.40	20 49 44.23	54 2 17.8
20 50 7.6	8.0	50 55.94	51 12.2	7 44.25	+12.40	-0 13.57	+11.57	-1.59	-19.40	20 50 42.53	53 17 28.2
20 51 27.2	8.2	52 15.80	51 56.2	5 5.40	-14.89	-0 13.57	+11.58	-1.60	-19.40	20 52 2.39	53 19 39.9
20 52 28.0	9.0	53 17.62	52 57.8	4 54.95	-15.04	-0 13.58	+11.54	-1.61	-19.40	20 53 4.19	53 19 50.2
20 53 43.6	6.0	54 30.78	54 13.7	24 35.85	-12.48	-0 13.60	+13.39	-1.51	-19.60	20 54 17.36	55 0 13.6
20 55 43.2	9.0	56 31.30	56 4.6	21 45.45	-19.46	-0 13.60	+13.38	-1.49	-19.60	20 56 17.91	55 2 57.1
20 56 20.0	9.0	57 10.08	57 2.5	22 32.05	- 5.68	-0 13.59	+12.46	-1.55	-19.60	20 56 56.69	54 2 23.4
20 57 21.3	9.1	58 10.60	58 0.3	33 3.95	- 7.80	-0 13.59	+12.26	-1.65	-19.30	20 57 57.13	53 51 49.7
20 59 12.9	8.8	0 4.20	59 38.0	34 56.80	-19.67	-0 13.59	+12.03	-1.66	-19.40	20 59 50.73	53 49 44.6
21 1 7.2	7.5	1 56.72	1 25.9	14 30.70	-23.49	-0 13.58	+11.24	-1.67	-19.40	21 1 43.29	53 10 6.3
21 2 13.5	7.8	3 3.82	2 36.5	41 44.05	-20.56	-0 13.59	+11.96	-1.68	-19.50	21 2 50.35	53 42 56.5
21 3 14.7	9.0	4 4.52	3 47.2	19 3.00	-13.22	-0 13.58	+11.34	-1.71	-19.50	21 3 51.06	53 5 44.4
21 3 35.4	9.3	4 25.82	4 45.7	19 3.00	+15.20	-0 13.58	+11.32	-1.71	-19.50	21 4 12.37	53 6 12.8
21 4 44.7	8.6	5 35.16	5 26.4	17 51.65	- 6.72	-0 13.58	+11.39	-1.72	-19.50	21 5 21.70	53 7 2.4
21 5 25.6	8.1	6 15.76	6 5.9	10 50.45	- 7.54	-0 13.58	+11.60	-1.72	-19.50	21 6 2.30	53 14 3.0
ZONE 338, OCTOBER 4, 1874.											
20 49 10.7	6.5	49 57.58	49 40.8	22 30.70	-12.55	-0 13.76	+12.57	-1.54	-19.60	20 49 43.99	54 2 18.5
20 50 7.6	7.8	50 56.30	50 44.1	7 22.35	- 9.28	-0 13.75	+11.76	-1.56	-19.60	20 50 42.74	53 17 29.3
20 51 27.2	8.4	52 15.90	51 50.7	5 1.65	-19.15	-0 13.75	+11.64	-1.57	-19.60	20 52 2.34	53 19 40.1
20 52 28.0	9.1	53 17.82	53 4.0	5 1.10	-10.48	-0 13.75	+11.75	-1.58	-19.60	20 53 4.25	53 19 49.5
20 53 43.6	6.2	54 31.00	54 12.2	24 36.45	-13.70	-0 13.78	+13.56	-1.73	-19.80	20 54 17.18	55 0 12.6
20 55 43.2	9.2	56 31.40	56 21.0	21 58.05	- 7.58	-0 13.78	+13.72	-1.75	-19.80	20 56 17.57	55 2 57.4
20 57 21.3	9.0	58 10.88	57 48.9	32 54.90	-16.51	-0 13.76	+12.32	-1.80	-19.80	20 57 57.09	53 51 50.4
20 59 12.9	8.9	0 4.22	59 49.5	35 6.50	-11.04	-0 13.76	+12.40	-1.80	-19.90	20 59 50.44	53 49 44.4
21 1 7.2	7.5	1 56.74	1 35.9	14 40.35	-15.87	-0 13.75	+11.50	-1.83	-19.90	21 1 42.98	53 10 4.9
21 2 13.5	7.6	3 3.86	2 38.3	41 47.85	-19.28	-0 13.75	+12.12	-1.83	-20.00	21 2 50.08	53 42 54.6
21 3 35.4	9.3	4 25.80	4 9.7	18 33.55	-12.22	-0 13.75	+11.51	-1.85	-19.90	21 4 12.04	53 6 15.5
21 4 44.7	8.5	5 35.19	5 12.6	17 42.15	-17.18	-0 13.75	+11.48	-1.86	-20.00	21 5 21.42	53 7 1.9
21 5 25.6	8.0	6 15.76	5 59.0	10 44.85	-12.79	-0 13.75	+11.70	-1.87	-20.00	21 6 1.98	53 14 3.8
21 6 54.1	8.4	7 44.14	7 19.2	48 33.50	-18.81	-0 13.75	+11.98	-1.88	-20.10	21 7 30.34	53 36 9.4
21 8 0.2	8.1	8 51.44	8 29.7	1 42.45	-16.47	-0 13.75	+11.80	-1.89	-20.10	21 8 37.65	53 23 2.7
21 9 9.2	9.4	10 0.06	9 29.0	56 4.00	-23.56	-0 13.75	+11.78	-1.90	-20.10	21 9 46.26	53 28 34.1
21 12 15.2	8.8	13 8.96	12 45.0	7 25.40	-18.26	-0 13.75	+11.65	-1.93	-20.20	21 12 55.16	53 17 18.0
21 13 56.4	7.0	14 46.52	14 26.1	45 53.05	-15.38	-0 13.75	+12.13	-1.76	-20.20	21 14 32.88	53 38 53.8
21 15 10.3	7.5	16 2.18	15 43.7	59 25.55	-14.02	-0 13.75	+11.83	-1.78	-20.20	21 15 48.54	53 25 22.4
21 16 44.1	9.0	17 34.92	17 4.5	29 46.55	-22.78	-0 13.76	+12.22	-1.77	-20.30	21 17 21.27	53 54 53.1
21 18 7.0	7.0	18 59.40	18 28.8	42 54.15	-21.02	-0 13.76	+12.00	-1.79	-20.30	21 18 45.75	53 41 47.0
21 19 27.9	8.6	20 20.26	19 52.7	7 11.70	-20.99	-0 13.75	+11.61	-1.81	-20.40	21 20 6.62	53 17 29.1
21 20 52.4	9.1	21 44.74	21 15.9	38 53.80	-21.66	-0 13.76	+12.09	-1.81	-20.40	21 21 31.08	53 45 46.9
21 22 36.3	7.5	23 25.82	23 9.0	21 41.70	-12.25	-0 13.78	+13.69	-1.81	-20.50	21 23 12.09	55 3 10.0
21 24 19.8	6.2	25 10.60	24 46.1	32 27.70	-17.94	-0 13.78	+13.39	-1.84	-20.50	21 24 56.86	54 52 18.1
21 25 40.8	9.1	26 33.58	26 6.3	42 57.90	-20.56	-0 13.76	+12.06	-1.86	-20.50	21 26 19.90	53 41 44.0
21 26 24.8	8.6	27 18.24	27 3.9	2 50.70	-10.86	-0 13.75	+11.83	-1.87	-20.50	21 27 4.58	53 22 0.7
21 27 19.0	7.7	28 12.12	27 58.7	57 4.50	-10.15	-0 13.75	+11.98	-1.88	-20.50	21 27 58.45	53 27 47.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
21 28 19.4	8.8	29 12.90	28 58.0	51 16.40	-11.26	-0 13.76	+12.08	-1.88	-20.50	21 28 59.22	53 33 35.0
21 29 2.3	6.8	29 54.19	29 46.5	39 18.00	- 5.79	-0 13.75	+12.29	-1.88	-20.60	21 29 40.51	53 45 39.0
21 30 42.7	7.8	31 35.94	31 10.3	17 41.85	-19.55	-0 13.75	+11.45	-1.91	-20.40	21 31 22.28	53 7 0.8
21 32 20.8	9.1	33 14.64	32 41.7	12 44.70	-25.08	-0 13.75	+11.44	-1.93	-20.40	21 33 0.96	53 11 52.5
21 34 11.8	7.0	35 5.52	34 39.7	11 52.05	-19.66	-0 13.75	+11.57	-1.95	-20.50	21 34 51.83	53 12 50.7
21 35 9.0	7.3	36 2.70	35 41.7	0 37.20	-15.93	-0 13.75	+11.85	-1.93	-20.50	21 35 49.03	53 24 9.6
21 36 7.4	9.0	37 1.38	36 34.6	54 48.40	-19.80	-0 13.77	+12.93	-1.94	-20.50	21 36 47.65	54 29 55.7
21 38 10.4	8.6	39 4.86	38 43.2	46 44.35	-15.98	-0 13.77	+13.20	-1.96	-20.60	21 38 51.11	54 38 3.9
21 39 8.1	8.0	40 2.12	39 44.4	42 12.25	-13.33	-0 13.76	+12.22	-1.98	-20.80	21 39 48.41	53 42 37.5
21 40 3.7	9.0	40 58.08	40 41.2	32 20.05	-12.68	-0 13.76	+12.40	-2.00	-20.80	21 40 44.35	53 52 30.5
21 41 12.9	9.0	42 8.14	41 55.3	27 56.15	- 9.58	-0 13.76	+12.51	-2.00	-20.80	21 41 54.41	53 56 57.7
21 43 17.8	7.3	44 12.36	44 2.3	36 35.60	- 7.59	-0 13.76	+12.39	-2.01	-20.80	21 43 58.64	53 48 20.2
21 44 24.2	8.6	45 19.06	44 57.8	28 36.70	-15.95	-0 13.76	+12.42	-2.02	-20.80	21 45 5.33	53 56 10.9
21 46 55.8	9.1	47 50.08	47 22.0	59 0.00	-21.30	-0 13.75	+11.73	-2.05	-20.90	21 47 36.37	53 25 41.5
21 48 28.8	8.8	49 24.36	49 8.1	42 46.10	-12.28	-0 13.76	+12.22	-2.06	-20.90	21 49 10.63	53 42 5.0
21 48 51.7	8.6	49 46.74	50 5.5	42 46.10	+14.16	-0 13.76	+12.20	-2.06	-20.90	21 49 33.01	53 42 31.4
21 49 51.9	6.5	50 46.82	50 28.9	4 20.05	-13.60	-0 13.75	+11.77	-2.08	-20.90	21 50 33.10	53 20 29.4
21 51 5.5	9.0	52 2.88	51 41.0	53 37.70	-17.34	-0 13.72	+ 9.70	-2.11	-20.80	21 51 49.23	51 31 6.1
21 52 2.4	9.2	53 0.52	52 42.6	8 14.55	-14.24	-0 13.71	+ 9.47	-2.12	-20.80	21 52 46.88	51 16 32.1
21 52 57.8	9.0	53 55.24	53 36.8	45 29.40	-14.52	-0 13.72	+ 9.93	-2.12	-20.90	21 53 41.59	51 39 17.4
21 53 56.1	9.0	54 53.58	54 41.4	36 54.05	- 9.60	-0 13.73	+10.14	-2.12	-20.90	21 54 39.92	51 47 57.9
ZONE 339, OCTOBER 6, 1874.											
20 49 10.7	6.8	49 57.52	49 31.0	22 21.80	-19.80	-0 13.57	+12.39	-1.48	-19.90	20 49 44.18	54 2 18.3
20 50 7.6	7.7	50 56.06	50 35.8	7 16.65	-15.44	-0 13.56	+11.63	-1.50	-19.90	20 50 42.75	53 17 27.1
20 51 27.2	8.0	52 15.76	51 50.0	4 58.65	-19.60	-0 13.56	+11.54	-1.51	-19.90	20 52 2.45	53 19 41.0
20 52 28.0	9.0	53 17.64	52 51.0	4 49.15	-20.21	-0 13.56	+11.53	-1.52	-20.00	20 53 4.32	53 19 49.8
20 53 43.6	6.2	54 30.62	54 3.9	24 27.50	-19.49	-0 13.58	+13.29	-1.49	-20.10	20 54 17.24	55 0 13.9
20 55 43.2	9.0	56 31.28	56 5.6	21 43.40	-18.73	-0 13.59	+13.43	-1.51	-20.20	20 56 17.88	55 2 58.9
21 22 36.3	8.2	23 25.76	23 15.3	21 44.35	- 7.65	-0 13.61	+13.57	-1.76	-20.90	21 23 12.25	55 3 10.1
21 24 19.8	6.9	25 10.36	24 36.7	32 18.00	-24.67	-0 13.61	+13.09	-1.78	-20.90	21 24 56.85	54 52 19.0
21 25 40.8	9.0	26 33.50	26 6.1	42 55.50	-20.64	-0 13.60	+12.00	-1.81	-20.90	21 26 20.03	53 41 44.6
21 26 24.8	8.7	27 18.18	26 59.7	2 44.90	-14.04	-0 13.60	+11.74	-1.82	-20.90	21 27 4.72	53 22 1.5
21 27 19.0	8.5	28 11.98	27 55.6	56 59.75	-12.42	-0 13.60	+11.89	-1.83	-20.90	21 27 58.51	53 27 48.5
21 29 2.3	8.7	29 54.16	29 36.3	39 7.70	-13.46	-0 13.60	+12.17	-1.83	-20.90	21 29 40.69	53 45 39.9
21 39 8.1	8.2	40 1.96	39 45.4	42 11.45	-12.50	-0 13.60	+12.17	-2.02	-21.10	21 39 48.37	53 42 37.4
21 40 3.7	9.1	40 57.90	40 41.3	32 18.05	-12.45	-0 13.61	+12.35	-1.94	-21.00	21 40 44.38	53 52 31.2
21 41 12.9	9.0	42 7.84	41 43.2	27 46.10	-18.42	-0 13.61	+12.36	-1.95	-21.00	21 41 54.31	53 56 57.2
21 43 17.8	7.8	44 12.24	43 45.1	36 20.60	-20.36	-0 13.61	+12.17	-1.97	-21.00	21 43 58.71	53 48 20.7
21 44 24.2	8.4	45 18.88	45 1.6	28 37.75	-12.21	-0 13.61	+12.41	-1.98	-21.10	21 45 5.34	53 56 11.9
21 46 55.8	8.8	47 49.94	47 25.3	58 58.85	-18.65	-0 13.61	+11.71	-2.00	-21.10	21 47 36.42	53 25 43.8
21 48 28.8	8.8	49 24.10	48 56.4	42 36.65	-20.86	-0 13.62	+12.03	-2.01	-21.30	21 49 10.56	53 42 4.0
21 48 51.7	8.6	49 46.54	49 56.2	42 36.65	+ 7.31	-0 13.62	+12.20	-2.02	-21.40	21 49 32.99	53 42 32.2
21 49 51.9	6.0	50 46.66	50 26.2	4 16.95	-15.58	-0 13.61	+11.68	-2.03	-21.30	21 50 33.13	53 20 28.7
21 51 5.5	8.8	52 2.60	51 41.2	53 35.50	-16.94	-0 13.58	+ 9.61	-2.06	-21.40	21 51 49.14	51 31 6.7
21 52 2.4	9.2	53 0.34	52 34.6	8 5.75	-20.45	-0 13.58	+ 9.28	-2.07	-21.40	21 52 46.88	51 16 32.6
21 52 57.8	8.9	53 55.20	53 37.1	45 27.40	-14.29	-0 13.58	+ 9.83	-2.08	-21.40	21 53 41.73	51 39 17.7
ZONE 340, OCTOBER 10, 1874.											
21 6 54.1	8.7	7 44.62	7 36.3	48 40.20	- 6.27	-0 14.31	+11.63	-1.53	-21.10	21 7 30.61	53 36 12.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
21 8 0.2	8.5	8 51.86	8 34.5	1 41.70	-13.20	-0 14.31	+11.37	-1.54	-21.10	21 8 37.86	53 23 4.2
21 12 15.2	9.1	13 9.26	12 45.4	7 21.40	-18.18	-0 14.31	+11.17	-1.59	-21.20	21 12 55.24	53 17 19.5
21 13 56.4	7.5	14 46.84	14 35.5	45 57.35	-8.52	-0 14.31	+11.73	-1.60	-21.30	21 14 32.80	53 38 53.8
21 15 10.3	7.8	16 2.58	15 42.3	59 20.70	-15.39	-0 14.31	+11.33	-1.61	-21.30	21 15 48.55	53 25 23.2
21 16 44.1	9.2	17 35.48	17 9.7	29 47.35	-19.33	-0 14.32	+11.80	-1.61	-21.40	21 17 21.43	53 54 53.1
21 18 7.0	8.0	18 59.96	18 33.4	42 52.35	-20.04	-0 14.32	+11.58	-1.62	-21.40	21 18 45.92	53 41 47.2
21 19 27.9	8.6	20 20.82	19 55.8	7 9.70	-19.01	-0 14.31	+11.17	-1.65	-21.50	21 20 6.78	53 17 30.5
21 20 52.4	9.1	21 45.36	21 22.0	38 54.80	-17.60	-0 14.32	+11.68	-1.66	-21.50	21 21 31.29	53 45 47.4
21 22 36.3	8.0	23 26.32	23 7.2	21 36.40	-13.92	-0 14.33	+13.04	-1.64	-21.70	21 23 12.21	55 3 10.7
21 24 19.8	7.0	25 11.06	24 41.1	32 19.25	-21.97	-0 14.33	+12.69	-1.67	-21.70	21 24 56.94	54 52 19.5
21 25 40.8	9.1	26 34.04	26 9.8	42 57.30	-18.23	-0 14.32	+11.62	-1.71	-21.60	21 26 19.95	53 41 44.3
21 26 24.8	8.7	27 18.70	27 3.8	2 46.70	-11.31	-0 14.31	+11.35	-1.71	-21.60	21 27 4.64	53 22 1.6
21 27 19.0	7.9	28 12.38	27 55.8	56 58.75	-12.57	-0 14.31	+11.47	-1.72	-21.60	21 27 58.31	53 27 48.5
21 29 2.3	7.2	29 54.74	29 48.4	39 14.60	-4.74	-0 14.32	+11.81	-1.72	-21.70	21 29 40.66	53 45 40.8
21 39 8.1	8.4	40 2.58	39 37.7	42 3.90	-18.75	-0 14.31	+11.65	-1.83	-21.90	21 39 48.47	53 42 37.7
21 40 3.7	9.1	40 58.58	40 40.4	32 16.00	-13.65	-0 14.31	+11.91	-1.84	-22.00	21 40 44.46	53 52 30.9
21 41 12.9	9.0	42 8.62	41 52.2	27 50.70	-12.28	-0 14.31	+11.99	-1.85	-22.00	21 41 54.49	53 56 57.7
21 43 17.8	7.9	44 12.83	43 48.3	36 20.65	-18.41	-0 14.31	+11.75	-1.87	-22.00	21 43 58.70	53 48 21.4
21 44 24.2	8.5	45 19.42	44 59.5	28 33.85	-14.90	-0 14.31	+11.94	-1.88	-22.10	21 45 5.28	53 56 11.9
21 46 55.8	9.2	47 50.56	47 27.1	58 59.70	-17.81	-0 14.30	+11.31	-1.90	-22.10	21 47 36.45	53 25 42.6
21 48 28.8	9.0	49 24.78	48 56.7	42 34.70	-21.16	-0 14.31	+11.60	-1.94	-22.10	21 49 10.62	53 42 4.6
21 48 51.7	8.8	49 47.32	49 56.4	42 34.70	+6.85	-0 14.31	+11.77	-1.92	-22.20	21 49 33.18	53 42 32.7
21 49 51.9	6.2	50 47.22	50 37.6	4 23.40	-7.29	-0 14.30	+11.33	-1.95	-22.20	21 50 33.08	53 20 29.5
21 51 5.5	9.2	52 3.22	51 44.6	53 36.45	-14.73	-0 14.26	+9.29	-1.98	-22.20	21 51 49.16	51 31 7.0
21 52 2.4	9.3	53 1.08	52 43.1	8 10.85	-14.32	-0 14.26	+9.03	-1.99	-22.20	21 52 47.02	51 16 32.8
21 52 57.8	9.0	53 55.74	53 38.1	45 26.40	-13.89	-0 14.26	+9.48	-1.99	-22.20	21 53 41.68	51 39 18.2
21 53 56.1	8.9	54 54.00	54 26.3	36 38.50	-21.79	-0 14.29	+9.49	-1.99	-22.10	21 54 39.91	51 47 58.4
ZONE 341, OCTOBER 11, 1874.											
21 2 57.9	7.7	3 50.36	3 11.6	19 41.65	-31.07	-0 14.90	+8.55	-1.53	-20.90	21 3 35.85	51 4 46.4
21 4 6.5	8.9	4 59.34	4 25.4	6 55.55	-26.98	-0 14.90	+9.01	-1.53	-20.90	21 4 44.83	51 17 37.5
21 5 46.9	6.4	6 38.28	6 3.0	21 22.35	-27.00	-0 14.94	+10.95	-1.50	-20.20	21 6 23.69	53 3 13.0
21 7 4.1	8.6	7 56.96	7 29.6	53 59.10	-21.69	-0 14.90	+9.32	-1.55	-21.10	21 7 42.43	51 30 39.1
21 8 29.1	8.7	9 22.62	8 55.2	27 16.80	-21.00	-0 14.92	+10.96	-1.53	-21.20	21 9 8.04	52 57 23.7
21 9 24.8	8.8	10 18.82	9 56.7	35 43.00	-17.76	-0 14.90	+8.71	-1.59	-21.10	21 10 4.29	50 48 58.7
21 10 24.7	7.0	11 18.78	11 0.4	38 59.60	-14.81	-0 14.90	+8.61	-1.60	-21.20	21 11 4.25	50 45 44.9
21 11 21.0	9.1	12 15.66	11 51.9	12 33.50	-19.38	-0 14.89	+7.98	-1.62	-21.20	21 12 1.15	50 12 5.8
21 13 4.0	7.6	13 58.06	13 25.9	43 38.00	-25.96	-0 14.90	+8.36	-1.62	-21.20	21 13 43.53	50 40 55.2
21 14 1.5	9.2	14 56.24	14 34.4	54 2.65	-17.64	-0 14.89	+8.31	-1.64	-21.20	21 14 41.71	50 30 38.9
21 15 1.5	6.1	15 54.28	15 35.5	53 0.50	-14.55	-0 14.92	+10.56	-1.60	-21.40	21 15 39.69	52 31 46.3
21 16 38.0	8.1	17 31.22	17 2.4	39 6.25	-22.16	-0 14.93	+10.70	-1.61	-21.40	21 17 16.61	52 45 33.1
21 18 15.3	9.0	19 10.28	18 38.8	11 27.95	-25.65	-0 14.89	+7.89	-1.69	-21.40	21 18 55.73	50 13 5.2
21 19 38.8	8.8	20 33.08	20 4.6	33 36.35	-22.89	-0 14.90	+8.61	-1.68	-21.40	21 20 18.52	50 51 0.4
21 20 26.6	7.6	21 23.46	21 0.6	49 3.15	-18.50	-0 14.89	+8.40	-1.69	-21.50	21 21 8.91	50 35 37.7
21 21 14.0	9.0	22 10.16	22 3.0	51 37.60	-5.82	-0 14.89	+8.53	-1.70	-21.50	21 21 55.61	50 33 16.1
21 21 58.6	4.0	22 52.40	22 38.5	3 28.60	-10.80	-0 14.92	+10.41	-1.67	-21.60	21 22 37.78	52 21 22.0
21 23 26.0	8.9	24 21.92	23 53.5	57 56.35	-23.01	-0 14.89	+8.18	-1.72	-21.50	21 24 7.36	50 26 39.9
21 24 39.5	9.0	25 35.48	25 4.3	42 43.30	-25.14	-0 14.90	+8.42	-1.73	-21.60	21 25 20.90	50 41 51.1
21 25 40.2	8.9	26 35.78	26 14.3	5 3.75	-17.42	-0 14.89	+8.11	-1.75	-21.60	21 26 21.21	50 19 38.1
21 26 42.5	9.7	27 37.98	27 50.8	20 13.15	+10.01	-0 14.91	+10.17	-1.72	-21.70	21 27 23.36	52 4 58.1
21 29 51.9	9.2	30 47.06	30 23.3	38 43.35	-18.74	-0 14.91	+9.66	-1.75	-21.80	21 30 32.44	51 45 58.7
21 31 11.3	8.1	32 8.42	31 36.6	18 51.20	-25.41	-0 14.90	+8.81	-1.78	-21.80	21 31 53.81	51 5 43.5
21 32 11.7	7.2	33 8.28	32 36.1	36 26.45	-25.90	-0 14.90	+8.54	-1.79	-21.80	21 32 53.68	50 48 7.5

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s 21 33 30.1	8.3	^m ^s 34 26.80	^m ^s 33 53.5	[′] [″] 51 4.00	[″] −26.94	^m ^s −0 14.89	[″] + 8.26	^s −1.81	[″] −21.80	^h ^m ^s 21 34 12.21	[°] [′] [″] 50 33 28.7
21 34 49.8	6.8	35 46.48	35 18.1	29 58.45	−22.78	−0 14.90	+ 8.65	−1.81	−21.90	21 35 31.87	50 54 38.8
21 38 20.2	9.4	39 17.74	38 50.6	3 10.20	−21.99	−0 14.89	+ 8.11	−1.86	−22.00	21 39 3.13	50 21 27.3
21 38 59.8	9.5	39 57.42	39 48.6	46 6.50	−7.10	−0 14.89	+ 8.63	−1.86	−22.00	21 39 42.81	50 37 46.5
21 40 48.7	7.0	41 46.20	41 14.1	18 43.90	−26.20	−0 14.89	+ 8.76	−1.88	−22.00	21 41 31.59	50 5 50.2
21 41 45.2	9.5	42 43.10	42 28.5	31 8.05	−11.71	−0 14.90	+ 8.89	−1.87	−22.10	21 42 28.47	50 53 40.6
21 42 55.9	9.0	43 53.48	43 26.3	37 21.35	−21.41	−0 14.91	+ 9.67	−1.87	−22.20	21 43 38.82	51 47 18.3
21 44 0.9	8.1	44 56.02	44 40.2	35 25.30	−12.14	−0 14.92	+ 10.99	−1.87	−22.30	21 44 41.32	52 49 24.9
21 44 59.1	9.7	45 55.84	45 44.8	19 30.95	−8.41	−0 14.92	+ 11.26	−1.87	−22.30	21 45 41.14	53 5 23.3
21 45 41.1	8.6	46 39.90	46 32.6	36 30.85	−5.87	−0 14.90	+ 8.80	−1.91	−22.20	21 46 25.26	50 48 23.7
21 46 51.9	8.3	47 50.16	47 29.6	34 3.75	−16.55	−0 14.90	+ 8.69	−1.92	−22.20	21 47 35.52	50 50 40.0
21 48 10.4	8.7	49 8.50	48 41.4	29 48.30	−21.74	−0 14.90	+ 8.67	−1.93	−22.20	21 48 53.85	50 54 50.3
21 49 25.1	8.9	50 22.46	49 51.5	57 25.70	−24.60	−0 14.90	+ 9.24	−1.94	−22.30	21 50 7.79	51 27 10.6
21 51 5.5	8.8	52 3.82	51 40.9	53 36.65	−18.13	−0 14.90	+ 9.41	−1.96	−22.30	21 51 49.14	51 31 6.4
21 52 2.4	9.0	53 1.66	52 51.2	8 20.65	−8.36	−0 14.90	+ 9.26	−1.97	−22.30	21 52 46.98	51 16 32.0
21 53 26.7	9.0	54 25.50	54 0.9	34 14.60	−19.33	−0 14.91	+ 8.69	−1.97	−22.40	21 54 10.80	51 50 26.5
21 54 30.6	8.8	55 29.54	55 10.4	10 57.35	−15.22	−0 14.90	+ 9.20	−1.99	−22.40	21 55 14.86	51 13 48.4
21 55 26.2	8.5	56 25.00	56 5.2	27 55.90	−15.53	−0 14.91	+ 9.82	−1.99	−22.40	21 56 10.29	51 56 50.2
21 56 14.1	9.4	57 13.94	56 58.9	55 15.65	−12.14	−0 14.90	+ 8.48	−2.02	−22.40	21 56 59.26	50 29 32.6
21 57 26.5	8.6	58 26.40	58 3.0	7 19.55	−19.02	−0 14.90	+ 8.12	−2.03	−22.40	21 58 11.73	50 17 21.5
21 59 1.4	9.4	0 1.66	59 32.6	36 52.50	−23.40	−0 14.91	+ 8.60	−2.04	−22.40	21 59 46.96	50 47 44.7
22 0 7.3	9.1	1 8.94	0 45.7	47 53.45	−18.73	−0 14.90	+ 8.45	−2.05	−22.40	22 0 54.25	50 36 48.3
22 0 55.2	8.9	1 54.02	1 35.4	9 9.60	−14.81	−0 14.91	+ 9.17	−2.05	−22.50	22 1 39.31	51 15 36.7
22 1 48.5	8.1	2 47.34	2 29.5	23 14.60	−13.93	−0 14.92	+ 10.03	−2.05	−22.50	22 2 32.60	52 1 33.5
22 3 4.9	8.9	4 4.22	3 40.6	29 0.35	−18.92	−0 14.91	+ 8.77	−2.07	−22.50	22 3 49.51	50 55 41.6
22 4 39.8	8.3	5 40.46	5 15.3	1 47.35	−20.44	−0 14.90	+ 8.20	−2.09	−22.50	22 5 25.77	50 22 52.5
22 5 33.1	8.9	6 33.36	6 2.6	50 40.20	−24.36	−0 14.91	+ 9.41	−2.08	−22.60	22 6 18.64	51 33 56.9
22 6 55.2	9.1	7 57.30	7 43.3	9 18.10	−11.15	−0 14.91	+ 9.21	−2.10	−22.60	22 7 42.58	51 15 32.1
22 8 4.1	8.3	9 4.72	8 35.6	27 56.70	−22.61	−0 14.92	+ 9.81	−2.10	−22.70	22 8 49.98	51 56 42.6
22 9 8.4	8.8	10 9.98	9 39.2	14 29.10	−25.10	−0 14.90	+ 7.83	−2.13	−22.60	22 9 55.28	50 10 5.8
22 10 34.4	8.4	11 35.08	11 17.8	32 20.95	−13.59	−0 14.92	+ 9.87	−2.13	−22.70	22 11 20.33	51 52 27.5
22 11 39.1	9.0	12 40.54	12 14.0	3 9.05	−21.51	−0 14.90	+ 8.14	−2.15	−22.60	22 12 25.83	50 21 29.9
22 12 25.7	8.5	13 27.78	13 47.2	31 19.75	+15.57	−0 14.91	+ 8.83	−2.15	−22.60	22 13 13.05	50 53 57.0
22 13 28.7	8.3	14 30.14	14 26.3	22 8.45	−2.97	−0 14.92	+ 10.19	−2.15	−22.70	22 14 15.40	52 2 51.1
ZONE 342, OCTOBER 12, 1874.											
21 2 45.2	7.7	3 38.20	3 12.2	24 30.65	−20.84	−0 14.99	+ 8.91	−1.50	−21.10	21 3 23.63	51 0 8.5
21 4 6.5	8.9	4 59.50	4 41.5	7 8.80	−14.32	−0 14.99	+ 9.39	−1.50	−21.10	21 4 44.93	51 17 37.5
21 5 46.9	5.5	6 38.44	6 21.1	21 36.95	−13.23	−0 15.03	+ 11.37	−1.47	−21.30	21 6 23.79	53 3 12.3
21 7 4.1	8.6	7 57.08	7 39.1	54 6.90	−14.25	−0 15.00	+ 9.59	−1.52	−21.20	21 7 42.48	51 30 39.7
21 8 29.1	8.9	9 22.68	9 2.8	27 24.00	−15.25	−0 15.01	+ 11.22	−1.50	−21.40	21 9 8.04	52 57 23.1
21 9 24.8	8.7	10 18.96	10 1.8	35 47.65	−13.83	−0 14.99	+ 8.88	−1.56	−21.20	21 10 4.37	50 48 58.8
21 10 24.7	7.2	11 18.84	10 55.4	38 56.75	−18.83	−0 14.99	+ 8.70	−1.57	−21.30	21 11 4.25	50 45 44.5
21 11 21.0	8.9	12 15.82	11 59.4	12 40.40	−13.35	−0 14.98	+ 8.19	−1.60	−21.30	21 12 1.24	50 12 5.8
21 13 4.0	8.4	13 58.18	13 28.4	43 40.55	−24.02	−0 14.99	+ 8.52	−1.60	−21.40	21 13 43.58	50 40 55.4
21 14 1.5	9.1	14 56.28	14 34.1	54 3.15	−17.96	−0 15.00	+ 8.44	−1.61	−21.40	21 14 41.67	50 30 38.8
21 15 1.5	6.3	15 54.38	15 35.4	53 0.55	−14.70	−0 15.02	+ 10.73	−1.57	−21.60	21 15 39.72	52 31 46.8
21 16 38.0	8.6	17 31.28	17 13.6	39 15.70	−13.62	−0 15.03	+ 10.99	−1.58	−21.60	21 17 16.60	52 45 33.1
21 18 15.3	9.1	19 10.30	18 45.1	11 34.65	−20.52	−0 14.99	+ 8.13	−1.66	−21.50	21 18 55.68	50 13 4.6
21 19 38.8	8.9	20 33.26	20 9.0	33 41.15	−19.60	−0 15.00	+ 8.81	−1.66	−21.60	21 20 18.62	50 50 59.6
21 20 26.6	7.5	21 23.48	21 4.5	49 7.35	−15.34	−0 15.00	+ 8.60	−1.67	−21.60	21 21 8.84	50 35 37.5
21 21 14.0	8.8	22 10.14	21 51.4	51 28.20	−15.12	−0 15.00	+ 8.59	−1.68	−21.60	21 21 55.50	50 33 16.9
21 21 58.6	4.5	22 52.42	22 44.9	3 33.75	−5.83	−0 15.02	+ 10.61	−1.64	−21.80	21 22 37.73	52 21 22.5

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s 21 23 26.0	8.6	^m ^s 24 22.06	^m ^s 23 59.8	[′] [″] 58 1.65	[″] −18.07	^m ^s −0 15.00	[″] + 8.40	^s −1.70	[″] −21.60	^h ^m ^s 21 24 7.41	[°] [′] [″] 50 26 40.5
21 24 39.5	8.7	25 35.62	25 14.1	42 50.95	−17.33	−0 15.00	+ 8.69	−1.70	−21.70	21 25 20.97	50 41 52.2
21 25 40.2	9.1	26 35.90	26 13.4	5 2.90	−18.27	−0 15.00	+ 8.24	−1.72	−21.70	21 26 21.25	50 19 38.9
21 26 42.5	9.6	27 37.96	27 20.3	19 50.95	−13.84	−0 15.01	+10.20	−1.69	−21.80	21 27 23.27	52 4 57.2
21 29 51.9	9.2	30 47.26	30 28.9	38 46.50	−14.49	−0 15.01	+ 9.86	−1.73	−22.00	21 30 32.56	51 46 0.6
21 31 11.3	8.2	32 8.56	31 43.8	18 55.65	−19.81	−0 15.00	+ 9.05	−1.76	−22.00	21 31 53.87	51 5 45.4
21 32 11.7	7.6	33 8.46	32 48.5	36 36.75	−16.08	−0 15.00	+ 8.84	−1.77	−22.00	21 32 53.78	50 48 7.9
21 33 30.1	8.2	34 27.04	34 3.9	51 12.20	−18.67	−0 15.00	+ 8.55	−1.78	−22.00	21 34 12.37	50 33 29.6
21 34 49.8	6.0	35 46.54	35 18.6	29 58.85	−22.38	−0 15.00	+ 8.79	−1.79	−22.00	21 35 31.85	50 54 39.6
21 35 46.9	8.7	36 44.14	36 38.1	33 39.45	− 4.82	−0 15.00	+ 8.96	−1.80	−22.10	21 36 29.45	50 51 16.6
21 37 10.5	7.0	38 8.00	37 36.3	7 19.40	−25.76	−0 14.99	+ 8.09	−1.83	−22.10	21 37 53.32	50 17 14.9
21 38 20.2	9.3	39 17.88	38 51.6	3 10.85	−21.34	−0 15.00	+ 8.26	−1.83	−22.10	21 39 3.19	50 21 28.1
21 38 59.8	9.6	39 57.36	39 48.7	46 6.80	− 7.18	−0 15.00	+ 8.77	−1.84	−22.20	21 39 42.66	50 38 46.8
21 40 48.7	7.0	41 46.18	41 17.8	18 46.00	−23.17	−0 14.99	+ 8.97	−1.86	−22.20	21 41 31.49	50 5 51.9
21 41 45.2	9.6	42 43.12	42 26.6	31 4.95	−13.24	−0 15.00	+ 9.00	−1.85	−22.20	21 42 28.41	50 53 43.0
21 42 55.9	8.9	43 53.42	43 35.3	37 28.60	−14.25	−0 15.01	+ 9.90	−1.85	−22.30	21 43 38.68	51 47 19.1
21 44 0.9	8.0	44 55.96	44 28.8	35 16.95	−20.91	−0 15.02	+11.04	−1.84	−22.40	21 44 41.19	52 49 25.2
21 44 59.1	9.5	45 55.96	46 6.0	19 45.85	+ 7.64	−0 15.02	+11.43	−1.85	−22.50	21 45 41.18	53 5 25.2
21 45 41.1	8.6	46 40.00	47 1.5	36 52.70	+17.29	−0 15.00	+ 8.83	−1.89	−22.30	21 46 25.28	50 48 25.7
21 46 51.9	8.3	47 50.34	47 38.8	34 10.80	− 9.24	−0 15.00	+ 8.93	−1.90	−22.40	21 47 35.62	50 50 41.1
21 48 10.4	8.6	49 8.58	48 43.6	29 49.50	−20.05	−0 15.00	+ 8.84	−1.91	−22.40	21 48 53.85	50 54 51.5
21 49 25.1	8.8	50 22.74	50 3.4	57 36.40	−15.30	−0 15.01	+ 9.55	−1.91	−22.50	21 50 7.99	51 27 10.1
21 51 5.5	8.9	52 3.90	51 43.9	53 40.05	−15.83	−0 15.02	+ 9.59	−1.94	−22.50	21 51 49.12	51 31 6.0
21 52 2.4	9.1	53 1.70	52 41.0	8 13.45	−16.47	−0 15.01	+ 9.33	−1.94	−22.50	21 52 46.94	51 16 31.7
21 53 26.7	9.0	54 25.50	54 4.7	34 17.30	−16.35	−0 15.02	+ 8.89	−1.95	−22.60	21 54 10.71	51 50 27.5
21 54 30.6	9.1	55 29.54	55 9.9	10 57.05	−15.61	−0 15.01	+ 9.34	−1.97	−22.60	21 55 14.77	51 13 49.0
21 55 26.2	8.6	56 25.18	56 7.4	27 58.35	−13.96	−0 15.02	+10.00	−1.96	−22.60	21 56 10.39	51 56 50.1
21 56 14.1	9.3	57 13.82	56 52.6	55 11.75	−17.16	−0 15.01	+ 8.56	−1.99	−22.50	21 56 59.06	50 29 32.2
21 57 26.5	9.0	58 26.44	58 3.0	7 20.40	−19.02	−0 15.00	+ 8.24	−2.01	−22.60	21 58 11.69	50 17 21.3
21 59 1.4	9.5	0 1.68	59 23.7	36 46.50	−30.40	−0 15.01	+ 8.58	−2.02	−22.60	21 59 46.90	50 47 44.2
22 0 7.3	9.2	1 8.88	0 42.8	47 50.45	−21.07	−0 15.01	+ 8.55	−2.03	−22.60	22 0 54.10	50 36 49.6
22 0 55.2	8.4	1 54.14	1 45.6	9 16.05	− 6.77	−0 15.01	+ 9.41	−2.02	−22.70	22 1 39.36	51 15 39.1
22 1 48.5	8.3	2 47.34	2 30.6	23 15.05	−13.07	−0 15.02	+10.22	−2.02	−22.70	22 2 32.53	52 1 34.7
22 3 4.9	9.0	4 4.18	3 47.5	29 5.95	−13.39	−0 15.01	+ 9.01	−2.05	−22.70	22 3 49.39	50 55 42.3
22 4 39.8	8.4	5 40.48	5 19.3	1 49.90	−17.20	−0 15.01	+ 8.39	−2.07	−22.70	22 5 25.70	50 22 54.0
22 5 33.1	8.7	6 33.54	6 19.6	50 54.50	−10.99	−0 15.02	+ 9.77	−2.06	−22.80	22 6 18.73	51 33 56.9
22 6 55.2	9.2	7 57.28	7 32.0	9 9.20	−20.14	−0 15.01	+ 9.25	−2.08	−22.80	22 7 42.48	51 15 32.6
22 8 4.1	7.0	9 4.86	8 40.5	28 2.00	−19.13	−0 15.02	+10.04	−2.08	−22.80	22 8 50.04	51 56 41.6
22 9 8.4	8.9	10 10.08	9 43.2	14 32.80	−21.92	−0 15.00	+ 8.02	−2.11	−22.80	22 9 55.30	50 10 6.1
22 10 34.4	8.7	11 35.22	11 11.2	32 17.35	−18.85	−0 15.02	+ 9.97	−2.11	−22.90	22 11 20.39	51 52 26.5
22 11 39.1	9.2	12 40.56	12 9.8	3 4.80	−25.00	−0 15.00	+ 8.20	−2.13	−22.80	22 12 25.77	50 21 31.3
22 12 25.7	8.8	13 27.86	13 13.0	30 53.55	−11.96	−0 15.01	+ 9.03	−2.13	−22.80	22 13 13.05	50 53 56.4
22 13 28.7	8.4	14 30.34	14 6.5	21 52.75	−18.62	−0 15.02	+10.19	−2.13	−22.90	22 14 15.52	52 2 51.7
ZONE 343, OCTOBER 15, 1874.											
21 10 21.2	7.0	11 14.00	10 42.8	31 6.75	−25.04	−0 14.03	+ 8.82	−1.49	−21.70	21 11 0.45	50 53 27.5
21 13 23.0	8.7	14 15.92	13 52.1	38 45.55	−19.15	−0 14.03	+ 8.74	−1.52	−21.80	21 14 2.36	50 45 54.6
21 14 5.2	8.8	14 59.14	14 48.8	17 10.35	− 9.42	−0 14.02	+ 8.20	−1.55	−21.80	21 14 45.59	50 7 39.1
21 16 48.0	9.1	17 42.00	17 25.9	49 16.00	−12.72	−0 14.03	+ 8.72	−1.53	−22.10	21 17 28.41	51 35 30.5
21 18 23.6	8.0	19 17.96	19 8.3	16 56.05	− 7.91	−0 14.02	+ 8.16	−1.58	−22.10	21 19 4.40	50 7 54.8
21 19 50.9	8.9	20 45.62	20 21.3	6 45.90	−19.75	−0 14.02	+ 8.26	−1.59	−22.00	21 20 32.05	50 17 53.4
21 21 0.9	7.8	21 53.84	21 29.3	5 26.75	−19.06	−0 14.04	+10.54	−1.55	−22.20	21 21 40.22	52 19 15.4
21 21 58.6	4.5	22 51.40	22 28.1	3 21.35	−18.10	−0 14.04	+10.53	−1.56	−22.30	21 22 37.77	52 21 21.7

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s "	"	h m s	° ' "
21 23 44.8	8.0	24 39.60	24 20.1	7 54.65	-15.85	-0 14.02	+ 8.28	-1.63	-22.10	21 24 26.01	50 16 48.7
21 25 1.4	9.5	25 55.04	25 34.9	1 31.35	-15.61	-0 14.04	+10.64	-1.59	-22.40	21 25 41.40	52 23 14.3
21 25 4.6	7.0	25 57.38	25 29.9	1 31.35	-21.36	-0 14.04	+10.56	-1.59	-22.40	21 25 43.74	52 23 8.5
21 26 1.9	9.1	26 55.14	26 37.6	7 39.45	-13.62	-0 14.04	+10.54	-1.60	-22.40	21 26 41.50	52 17 8.2
21 26 59.9	8.9	27 53.60	27 41.3	33 4.10	- 9.45	-0 14.05	+11.24	-1.60	-22.50	21 27 39.93	52 51 48.3
21 27 26.4	8.2	28 19.92	28 22.1	8 9.30	+ 1.71	-0 14.04	+10.61	-1.62	-22.50	21 28 6.27	52 16 53.7
21 29 11.5	9.6	30 6.84	30 1.9	41 57.40	- 3.86	-0 14.04	+ 9.96	-1.65	-22.40	21 29 53.19	51 42 59.6
21 29 30.5	8.8	30 24.38	30 2.7	41 57.40	-17.11	-0 14.04	+ 9.84	-1.65	-22.50	21 30 10.73	51 42 46.1
21 30 44.7	8.6	31 40.60	31 14.7	11 21.25	-21.08	-0 14.02	+ 8.17	-1.69	-22.40	21 31 26.99	50 13 16.8
21 32 12.7	6.8	33 8.32	32 38.9	54 24.40	-23.80	-0 14.03	+ 8.36	-1.70	-22.50	21 32 54.69	50 30 11.1
21 32 53.6	8.4	33 48.02	33 32.4	57 46.55	-12.37	-0 14.03	+ 9.60	-1.69	-22.60	21 33 34.37	51 27 1.5
21 34 12.0	9.0	35 8.60	34 45.1	10 7.05	-18.71	-0 14.03	+ 9.29	-1.70	-22.60	21 34 54.96	51 14 34.5
21 34 55.6	8.3	35 51.24	35 39.1	25 28.80	- 9.69	-0 14.03	+ 9.17	-1.72	-22.60	21 35 37.59	50 59 21.6
21 35 46.9	8.7	36 43.16	36 31.3	33 34.85	- 9.56	-0 14.04	+ 8.96	-1.73	-22.60	21 36 29.50	50 51 15.6
21 37 10.5	7.4	38 7.06	.....	.....	.....	-0 14.03	.....	-1.75	.....	21 37 53.42	.....
21 38 20.2	9.4	39 16.78	38 54.0	3 12.80	-18.50	-0 14.04	+ 8.33	-1.76	-22.60	21 39 3.12	50 21 28.2
21 40 7.2	6.0	41 2.20	40 38.7	43 10.60	-18.53	-0 14.05	+ 9.79	-1.75	-22.80	21 40 48.51	51 41 31.7
21 41 25.4	8.0	42 22.18	41 52.8	28 52.75	-23.06	-0 14.05	+ 9.96	-1.76	-22.80	21 42 8.48	51 55 45.2
21 42 36.2	9.1	43 32.70	43 11.5	8 28.30	-16.88	-0 14.04	+ 9.33	-1.79	-22.80	21 43 19.01	51 16 15.3
21 44 3.8	8.7	44 58.94	44 28.0	31 22.55	-23.72	-0 14.06	+11.08	-1.76	-23.00	21 44 45.21	52 53 15.8
21 46 22.0	8.8	47 17.60	46 46.7	42 15.45	-23.27	-0 14.08	+12.01	-1.77	-23.10	21 47 3.82	53 42 24.3
21 47 12.6	8.8	48 8.20	47 55.8	31 24.65	- 9.30	-0 14.08	+12.45	-1.78	-23.10	21 47 54.41	53 53 29.6
21 49 2.0	8.8	49 58.67	49 42.0	1 7.05	-12.96	-0 14.05	+10.60	-1.83	-23.00	21 49 44.93	52 23 41.9
21 49 57.8	8.8	50 54.14	50 34.0	17 50.00	-15.35	-0 14.07	+11.48	-1.82	-23.20	21 50 40.37	53 6 57.2
21 50 50.2	9.0	51 47.70	51 30.9	57 17.40	-13.61	-0 14.04	+ 8.51	-1.87	-23.00	21 51 34.00	50 27 28.9
21 52 13.5	8.5	53 12.30	52 50.1	9 38.55	-18.06	-0 14.03	+ 8.19	-1.89	-23.00	21 52 58.61	50 15 3.0
21 52 26.5	8.5	53 27.30	52 47.1	9 38.55	-32.71	-0 14.03	+ 7.89	-1.89	-23.00	21 53 13.61	50 14 48.0
21 53 26.2	8.7	54 22.04	53 53.1	9 17.60	-22.51	-0 14.05	+10.33	-1.88	-23.10	21 54 8.28	52 15 21.6
21 54 44.1	7.0	55 42.42	55 8.5	29 24.25	-27.19	-0 14.04	+ 8.76	-1.91	-23.10	21 55 28.69	50 55 8.8
21 55 36.1	8.8	56 34.54	56 10.0	43 23.20	-19.83	-0 14.04	+ 8.68	-1.92	-23.10	21 56 20.81	50 41 17.1
21 57 2.5	9.1	58 1.38	57 35.3	2 59.35	-21.18	-0 14.04	+ 8.20	-1.94	-23.10	21 57 47.65	50 21 39.2
21 59 5.8	9.3	0 3.84	59 40.0	21 39.25	-18.62	-0 14.05	+10.22	-1.93	-23.30	21 59 50.07	52 3 3.8
21 59 53.0	8.4	0 51.36	0 34.0	39 13.70	-13.70	-0 14.05	+ 9.91	-1.94	-23.30	22 0 37.60	51 45 34.0
22 1 13.4	9.0	2 11.22	1 46.5	19 50.90	-18.88	-0 14.06	+11.35	-1.93	-23.40	22 1 57.43	53 4 53.0
22 2 26.2	8.6	3 25.22	2 52.9	9 7.40	-25.15	-0 14.05	+10.30	-1.95	-23.40	22 3 11.45	52 15 29.2
22 3 29.9	8.5	4 29.54	4 11.1	58 45.30	-14.91	-0 14.04	+ 8.46	-2.00	-23.20	22 4 15.79	50 26 0.0
22 4 43.2	9.0	5 42.70	5 18.7	9 56.65	-19.53	-0 14.03	+ 8.16	-2.01	-23.30	22 5 28.96	50 14 43.6
22 5 29.7	8.7	6 30.44	6 12.2	37 8.70	-14.65	-0 14.05	+10.02	-1.99	-23.40	22 6 16.66	51 47 38.3
22 8 4.1	7.5	9 3.60	8 47.5	28 7.30	-12.63	-0 14.05	+10.15	-2.01	-23.40	22 8 49.82	51 56 41.9
22 9 10.2	8.0	10 10.78	9 55.8	47 41.05	-11.58	-0 14.05	+10.96	-2.02	-23.50	22 9 56.97	52 37 10.0
22 10 18.3	9.0	11 17.92	10 59.0	1 59.30	-14.68	-0 14.05	+10.66	-2.04	-23.50	22 11 4.11	52 22 48.4
22 11 30.1	8.6	12 29.38	12 4.1	23 8.15	-19.36	-0 14.06	+11.33	-2.04	-23.60	22 12 15.55	53 1 35.5
22 13 6.9	8.4	14 8.20	13 41.6	15 11.40	-21.68	-0 14.03	+ 8.12	-2.09	-23.40	22 13 54.44	50 9 26.9
22 14 43.3	9.0	15 44.50	15 18.0	2 37.90	-21.51	-0 14.04	+ 8.31	-2.10	-23.50	22 15 30.72	50 22 0.8
22 14 55.7	6.0	15 56.68	15 56.0	3 52.15	- 0.57	-0 14.04	+ 8.47	-2.10	-23.50	22 15 42.90	50 21 7.6
22 15 48.2	9.4	16 50.06	16 33.6	38 12.35	-12.70	-0 14.06	+11.12	-2.08	-23.60	22 16 36.22	52 46 37.9
22 17 12.2	9.5	18 12.56	17 50.6	27 34.00	-16.87	-0 14.06	+11.28	-2.10	-23.70	22 17 58.71	52 57 12.2
22 18 16.1	8.5	19 17.36	18 49.2	46 36.40	-21.78	-0 14.05	+10.83	-2.11	-23.70	22 19 3.52	52 38 4.5
22 19 14.1	9.2	20 15.48	19 45.7	46 59.35	-23.01	-0 14.05	+10.78	-2.12	-23.70	22 20 1.64	52 37 40.3
22 20 5.1	8.7	21 6.16	20 47.5	41 18.95	-15.06	-0 14.04	+ 8.80	-2.15	-23.70	22 20 52.36	50 43 26.7
22 21 32.4	8.8	22 34.54	22 4.5	56 42.70	-23.25	-0 14.05	+10.62	-2.14	-23.70	22 22 20.70	52 27 56.6
22 22 27.3	9.3	23 30.02	23 6.6	10 10.35	-19.04	-0 14.03	+ 8.27	-2.17	-23.60	22 23 16.23	50 14 30.9

ZONE 344, OCTOBER 19, 1874.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
21 10 21.2	7.5	11 12.28	10 44.7	31 8.25	-22.15	-0 12.41	+ 8.94	-1.38	-22.20	21 11 0.46	50 53 28.2
21 13 23.0	8.7	14 14.26	13 48.4	38 42.85	-20.84	-0 12.41	+ 8.75	-1.41	-22.30	21 14 2.43	50 45 54.8
21 14 5.2	8.8	14 57.44	14 41.5	17 4.35	-12.97	-0 12.40	+ 8.24	-1.44	-22.30	21 14 45.62	50 7 40.7
21 16 48.0	9.1	17 40.16	17 19.1	49 11.85	-16.67	-0 12.41	+ 9.71	-1.42	-22.50	21 17 28.30	51 35 30.9
21 18 23.6	8.5	19 16.42	18 50.3	16 41.85	-21.29	-0 12.39	+ 8.09	-1.47	-22.40	21 19 4.60	50 7 54.8
21 19 50.9	8.9	20 43.94	20 28.3	6 53.05	-12.68	-0 12.39	+ 8.40	-1.48	-22.50	21 20 32.11	50 17 52.5
21 21 0.9	7.0	21 52.26	21 26.7	5 25.15	-19.91	-0 12.41	+10.58	-1.44	-22.70	21 21 40.38	52 19 15.3
21 21 58.6	5.8	22 49.58	22 26.5	3 19.80	-17.94	-0 12.42	+10.58	-1.45	-22.80	21 22 37.68	52 21 22.5
21 23 44.8	8.7	24 38.04	24 14.0	7 50.40	-19.51	-0 12.39	+ 8.28	-1.52	-22.70	21 24 26.19	50 16 48.3
21 25 1.4	9.4	25 53.34	25 28.5	1 26.15	-19.26	-0 12.42	+10.66	-1.48	-22.90	21 25 41.43	52 23 15.0
21 25 4.6	7.7	25 55.68	25 21.8	1 26.15	-26.33	-0 12.42	+10.52	-1.48	-22.90	21 25 43.77	52 23 7.8
21 26 1.9	9.2	26 53.52	26 35.5	7 39.65	-14.01	-0 12.41	+10.59	-1.49	-23.00	21 26 41.62	52 17 6.6
21 26 59.9	8.8	27 51.88	27 34.2	32 59.20	-13.60	-0 12.42	+11.23	-1.49	-23.00	21 27 39.95	52 50 48.2
21 27 26.4	8.8	28 18.30	28 41.5	8 23.85	+17.99	-0 12.41	+10.51	-1.51	-23.00	21 28 6.39	52 16 54.4
21 29 11.5	9.3	30 5.20	29 44.4	41 46.35	-16.40	-0 12.41	+ 9.93	-1.54	-23.10	21 29 53.29	51 42 57.0
21 29 30.5	8.9	30 22.72	29 48.2	41 46.35	-27.20	-0 12.41	+ 9.87	-1.54	-23.00	21 30 10.81	51 42 46.2
21 30 44.7	8.7	31 38.84	31 14.9	11 22.15	-19.45	-0 12.39	+ 8.26	-1.58	-23.00	21 31 26.97	50 13 16.6
21 32 12.7	6.9	33 6.64	32 41.0	54 28.55	-20.72	-0 12.40	+ 8.44	-1.60	-23.00	21 32 54.74	50 30 9.2
21 32 53.6	8.4	33 46.36	33 37.1	57 50.00	- 7.55	-0 12.41	+ 9.70	-1.59	-23.10	21 33 34.43	51 27 2.1
21 34 12.0	9.0	35 7.00	34 43.6	10 6.40	-18.71	-0 12.40	+ 9.44	-1.61	-23.20	21 34 55.08	51 14 34.3
21 34 55.6	8.5	35 49.68	35 36.9	25 28.05	-10.25	-0 12.40	+ 9.24	-1.61	-23.20	21 35 37.77	50 59 20.9
21 35 46.9	8.8	36 41.46	36 23.7	33 28.05	-14.30	-0 12.40	+ 8.96	-1.63	-23.20	21 36 29.54	50 51 16.6
21 37 10.5	7.1	38 5.40	37 44.1	7 25.65	-17.32	-0 12.39	+ 8.33	-1.65	-23.20	21 37 53.50	50 17 15.5
21 38 40.1	8.6	39 34.28	39 2.6	3 17.70	-25.73	-0 12.40	+ 8.23	-1.67	-23.20	21 39 22.35	50 21 15.0
21 40 7.2	6.5	41 0.66	40 35.6	43 8.70	-19.79	-0 12.41	+ 9.81	-1.65	-23.40	21 40 48.71	51 41 31.4
21 41 25.4	8.6	42 20.58	42 0.8	28 59.85	-15.53	-0 12.41	+10.12	-1.66	-23.40	21 42 8.62	51 55 44.8
21 42 36.2	9.2	43 31.02	43 14.0	8 32.30	-13.53	-0 12.40	+ 9.40	-1.68	-23.40	21 43 19.08	51 16 13.7
21 44 3.8	8.9	44 57.26	44 36.8	31 30.00	-15.74	-0 12.42	+11.32	-1.66	-23.60	21 44 45.27	52 53 15.6
21 44 59.6	9.0	45 53.08	45 39.4	13 33.00	-10.68	-0 12.41	+10.49	-1.68	-23.60	21 45 41.11	52 11 16.9
21 46 22.0	9.0	47 15.94	46 51.4	42 20.60	-18.45	-0 12.44	+12.19	-1.66	-23.70	21 47 3.91	53 42 23.2
21 47 12.6	8.8	48 6.44	47 50.2	31 20.90	-12.15	-0 12.44	+12.52	-1.67	-23.80	21 47 54.40	53 53 29.5
21 49 2.0	8.8	49 57.13	49 33.4	1 1.20	-18.48	-0 12.42	+10.58	-1.73	-23.60	21 49 45.12	52 23 41.2
21 49 57.8	8.6	50 52.54	50 37.1	17 52.65	-11.76	-0 12.43	+11.58	-1.72	-23.70	21 50 40.51	53 6 57.4
21 50 50.2	8.8	51 46.20	51 31.5	57 18.00	-11.90	-0 12.40	+ 8.58	-1.78	-23.60	21 51 34.23	50 27 29.0
21 52 13.5	8.5	53 10.76	52 52.8	9 39.40	-14.64	-0 12.38	+ 8.26	-1.80	-23.70	21 52 58.81	50 15 4.5
21 52 26.5	8.6	53 25.72	52 50.3	9 39.40	-28.80	-0 12.38	+ 8.02	-1.80	-23.70	21 53 13.77	50 14 50.1
21 53 26.2	8.8	54 20.42	54 10.1	9 30.55	- 8.02	-0 12.40	+10.56	-1.77	-23.80	21 54 8.42	52 15 22.3
21 54 44.1	7.5	55 40.70	55 15.0	29 30.15	-20.61	-0 12.39	+ 8.92	-1.82	-23.70	21 55 28.71	50 55 8.6
21 55 36.1	9.0	56 33.02	56 14.2	43 26.60	-15.15	-0 12.39	+ 8.78	-1.82	-23.70	21 56 21.04	50 41 17.5
21 57 2.5	9.5	57 59.78	57 38.5	3 0.95	-17.29	-0 12.39	+ 8.29	-1.84	-23.80	21 57 47.80	50 21 40.5
21 59 5.8	9.3	0 2.14	59 39.8	21 39.30	-17.45	-0 12.40	+10.30	-1.83	-24.00	21 59 50.12	52 3 3.9
21 59 53.0	8.8	0 49.70	0 42.1	39 18.00	- 5.98	-0 12.40	+ 9.99	-1.85	-24.00	22 0 37.68	51 45 36.4
22 1 13.4	9.2	2 9.64	1 51.4	19 55.20	-13.91	-0 12.41	+11.48	-1.84	-24.10	22 1 57.59	53 4 52.7
22 2 26.2	9.0	3 23.64	3 3.7	9 15.70	-15.49	-0 12.40	+10.49	-1.86	-24.10	22 3 11.61	52 15 29.7
22 3 29.9	9.0	4 27.94	4 7.6	58 43.55	-16.45	-0 12.39	+ 8.47	-1.91	-23.90	22 4 15.93	50 25 59.1
22 4 43.2	9.1	5 40.92	5 12.1	9 51.00	-23.43	-0 12.38	+ 8.11	-1.92	-24.00	22 5 28.92	50 14 44.3
22 5 29.7	9.1	6 28.64	6 8.0	37 5.55	-16.20	-0 12.40	+10.06	-1.90	-24.10	22 6 16.60	51 47 38.8
22 6 59.3	9.5	7 56.60	7 35.3	18 47.70	-16.65	-0 12.40	+10.32	-1.91	-24.20	22 7 44.55	52 5 56.4
22 8 4.1	7.7	9 2.14	8 46.1	28 6.60	-12.54	-0 12.40	+10.23	-1.94	-24.20	22 8 50.08	51 56 41.6
22 9 10.2	8.9	10 9.10	9 49.8	47 37.00	-14.90	-0 12.41	+10.99	-1.93	-24.20	22 9 57.02	52 37 9.6
22 10 18.3	8.8	11 16.44	11 3.1	2 2.70	-10.33	-0 12.41	+10.77	-1.95	-24.30	22 11 4.36	52 22 48.2
22 11 30.1	8.3	12 27.72	12 9.3	23 12.70	-14.08	-0 12.41	+11.46	-1.95	-24.40	22 12 15.63	53 1 35.1
22 13 6.9	8.6	14 6.52	13 39.8	15 9.65	-21.76	-0 12.38	+ 8.19	-2.01	-24.20	22 13 54.49	50 9 27.5

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
22 14 43.3	9.0	15 42.96	15 22.3	2 41.45	-16.80	-0 12.39	+ 8.42	-2.02	-24.20	22 15 30.91	50 22 1.0
22 14 55.7	6.9	15 55.08	15 34.2	3 34.65	-16.97	-0 12.39	+ 8.38	-2.02	-24.20	22 15 43.03	50 21 7.5
22 15 48.2	9.5	16 48.28	16 39.2	38 17.20	- 7.00	-0 12.41	+11.22	-1.99	-24.40	22 16 36.18	52 46 37.6
22 17 12.2	9.4	18 10.94	17 44.7	27 29.45	-20.09	-0 12.41	+11.31	-2.01	-24.50	22 17 58.83	52 57 12.3
22 18 16.1	8.7	19 15.66	18 55.9	46 41.50	-15.29	-0 12.41	+11.02	-2.02	-24.50	22 19 3.55	52 38 4.8
22 19 14.1	9.1	20 13.80	19 47.0	46 59.70	-20.69	-0 12.41	+10.91	-2.04	-24.50	22 20 1.68	52 37 41.2
22 20 5.1	8.6	21 4.56	20 44.7	41 16.35	-16.03	-0 12.39	+ 8.85	-2.07	-24.50	22 20 52.49	50 43 27.2
22 22 27.3	9.2	23 28.32	23 9.4	10 11.55	-15.36	-0 12.36	+ 8.37	-2.09	-24.40	22 23 16.28	50 14 32.3
ZONE 345, OCTOBER 20, 1874.											
21 16 45.5	8.3	17 37.58	17 13.2	6 17.80	-19.82	-0 11.69	+ 8.14	-1.43	-22.50	21 17 26.48	50 18 20.5
21 17 39.6	8.8	18 30.30	18 8.6	38 50.15	-17.09	-0 11.71	+ 9.66	-1.39	-22.70	21 18 19.17	51 45 52.2
21 17 41.8	9.0	18 32.36	18 40.1	38 50.15	+ 6.06	-0 11.71	+ 9.77	-1.39	-22.70	21 18 21.23	51 46 15.5
21 19 6.5	9.5	19 57.84	19 34.5	12 41.55	-18.58	-0 11.70	+ 9.08	-1.43	-22.70	21 19 46.71	51 11 58.8
21 20 8.0	8.8	20 58.70	20 28.8	34 45.15	-24.03	-0 11.70	+ 8.52	-1.44	-22.70	21 20 47.58	50 49 49.3
21 20 56.8	8.7	21 46.06	21 32.0	27 50.00	-10.56	-0 11.73	+12.27	-1.36	-23.20	21 21 34.87	53 57 1.2
21 22 25.7	9.1	23 16.38	22 50.3	50 43.95	-20.19	-0 11.71	+10.60	-1.42	-23.00	21 23 5.22	52 33 56.2
21 23 14.5	7.0	24 4.72	23 45.3	40 3.00	-14.95	-0 11.71	+10.87	-1.42	-23.00	21 23 53.55	52 44 42.7
21 24 5.5	8.3	24 56.16	24 38.2	52 47.95	-13.93	-0 11.71	+10.60	-1.44	-23.00	21 24 44.99	52 31 58.6
21 25 3.6	9.2	25 54.94	25 34.8	0 9.60	-15.60	-0 11.71	+10.51	-1.45	-23.10	21 25 43.77	52 24 35.1
21 26 9.0	8.9	27 0.68	26 39.0	42 43.70	-17.49	-0 11.70	+ 8.54	-1.50	-23.10	21 26 49.54	50 41 57.2
21 27 43.8	8.8	28 36.00	28 10.1	52 47.40	-20.05	-0 11.71	+10.52	-1.47	-23.20	21 28 24.82	52 31 52.9
21 29 0.7	9.4	29 52.08	29 27.5	14 9.15	-18.75	-0 11.71	+10.06	-1.50	-23.20	21 29 40.89	52 10 32.1
21 30 2.2	9.3	30 53.56	30 31.5	21 19.00	-16.90	-0 11.71	+11.20	-1.49	-23.30	21 30 42.35	53 3 25.2
21 30 45.1	8.9	31 35.84	31 26.2	8 25.95	- 7.47	-0 11.71	+10.35	-1.51	-23.30	21 31 24.65	52 16 26.9
21 31 10.7	7.9	32 1.50	31 54.1	9 27.00	- 5.76	-0 11.71	+10.31	-1.51	-23.30	21 31 50.31	52 15 27.5
21 32 51.0	9.0	33 42.96	33 22.3	17 23.10	-16.53	-0 11.70	+ 9.02	-1.56	-23.30	21 33 31.78	51 7 19.4
21 34 17.8	7.7	35 9.88	34 45.7	36 48.95	-19.04	-0 11.71	+ 9.74	-1.56	-23.40	21 34 58.68	51 47 51.7
21 35 40.4	8.1	36 33.90	36 12.5	39 14.85	-17.22	-0 11.70	+ 8.56	-1.61	-23.40	21 36 22.70	50 45 26.6
21 37 11.8	9.3	38 3.88	37 42.3	41 3.55	-16.64	-0 11.71	+10.88	-1.56	-23.50	21 37 52.66	52 43 40.7
21 38 14.3	7.0	39 7.32	38 44.9	34 34.10	-17.61	-0 11.71	+ 9.72	-1.60	-23.50	21 38 56.10	51 50 8.1
21 39 15.4	8.8	40 9.80	39 49.1	54 54.00	-16.75	-0 11.69	+ 8.27	-1.64	-23.40	21 39 58.61	50 29 47.8
21 40 19.6	8.5	41 12.74	40 56.7	35 56.45	-12.58	-0 11.71	+ 9.85	-1.62	-23.60	21 41 1.51	51 48 50.9
21 41 27.4	7.8	42 20.08	42 3.7	51 58.20	-12.98	-0 11.70	+ 9.53	-1.64	-23.60	21 42 8.86	51 32 48.5
21 42 57.9	9.1	43 51.70	43 22.5	15 52.05	-23.31	-0 11.70	+ 8.98	-1.67	-23.60	21 43 40.47	51 8 43.9
21 44 25.7	8.2	45 18.52	44 58.0	10 19.25	-15.61	-0 11.71	+11.46	-1.62	-23.80	21 45 7.27	53 14 26.7
21 45 41.1	8.6	46 36.50	46 18.1	36 18.25	-14.79	-0 11.70	+ 8.74	-1.70	-23.70	21 46 25.27	50 48 26.0
21 46 51.5	8.9	47 46.30	47 33.4	17 30.70	-10.08	-0 11.71	+10.18	-1.68	-23.80	21 47 35.04	52 7 19.6
21 48 54.4	8.8	49 48.66	49 21.2	14 22.65	-21.94	-0 11.70	+ 8.94	-1.72	-23.80	21 49 37.42	51 10 14.7
21 49 46.9	9.4	50 41.00	50 23.0	54 29.25	-13.94	-0 11.71	+10.52	-1.70	-23.90	21 50 29.73	52 30 17.6
21 50 40.1	8.6	51 35.32	51 22.3	54 17.90	-10.52	-0 11.69	+ 8.37	-1.75	-23.80	21 51 24.09	50 30 30.4
21 53 34.2	8.5	54 27.62	54 1.4	45 38.60	-19.76	-0 11.73	+11.84	-1.72	-24.10	21 54 16.29	53 39 3.7
21 54 44.6	8.8	55 38.82	55 21.6	56 18.85	-13.02	-0 11.73	+ 9.67	-1.73	-24.20	21 55 27.50	53 28 28.0
21 56 13.5	9.0	57 9.04	56 54.3	40 52.75	-11.84	-0 11.70	+ 8.71	-1.80	-24.00	21 56 57.78	50 43 54.6
21 57 28.5	9.4	58 24.32	58 7.4	58 27.85	-13.11	-0 11.70	+10.48	-1.78	-24.20	21 58 13.03	52 26 19.8
21 58 22.2	8.4	59 17.96	.....	.....	.....	-0 11.70	.....	-1.79	.....	21 59 6.66	.....
21 59 10.4	9.0	0 5.70	59 47.6	48 35.10	-13.99	-0 11.70	+10.67	-1.80	-24.20	21 59 54.40	52 36 12.0
22 0 10.8	9.0	1 7.64	0 42.7	13 13.15	-19.43	-0 11.70	+10.12	-1.82	-24.20	22 0 56.34	52 11 28.0
22 1 16.9	8.3	2 12.26	1 59.3	14 18.85	-10.14	-0 11.70	+10.20	-1.83	-24.20	22 2 0.95	52 10 31.7
22 2 21.1	8.6	3 19.02	2 53.9	35 48.15	-20.18	-0 11.69	+ 8.70	-1.86	-24.10	22 3 7.74	50 48 51.0
22 3 31.9	8.5	4 29.24	3 57.3	14 44.55	-26.00	-0 11.68	+ 7.78	-1.89	-24.10	22 4 17.97	50 9 47.9
22 5 0.3	8.9	5 56.12	5 33.2	38 8.95	-17.62	-0 11.70	+10.84	-1.85	-24.40	22 5 44.80	52 46 34.7
22 5 58.3	8.1	6 54.88	6 34.9	2 22.60	-15.54	-0 11.70	+10.42	-1.87	-24.40	22 6 43.56	52 22 22.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	' "	"	^m ^s	"	^s	"	^h ^m ^s	[°] ' "
22 7 12.2	9.1	8 9.06	7 36.2	19 31.95	-25.14	-0 11.70	+11.00	-1.87	-24.50	22 7 57.73	53 5 4.3
22 8 9.7	7.7	9 6.90	8 40.2	38 15.90	-21.02	-0 11.70	+ 9.63	-1.91	-24.40	22 8 55.57	51 46 23.3
22 9 26.2	7.8	10 24.14	9 59.2	32 49.35	-19.99	-0 11.69	+ 8.69	-1.93	-24.30	22 10 12.83	50 51 50.1
22 11 28.9	9.0	12 27.28	12 6.6	7 43.05	-16.83	-0 11.68	+ 8.11	-1.97	-24.30	22 12 15.97	50 16 59.0
22 12 8.0	8.4	13 6.24	12 53.4	4 57.25	-10.39	-0 11.68	+ 8.17	-1.97	-24.40	22 12 54.94	50 19 51.3
22 13 13.5	8.9	14 11.62	13 56.8	49 39.45	-11.96	-0 11.68	+ 8.45	-1.98	-24.40	22 14 0.31	50 35 7.8
22 14 13.8	7.8	15 12.58	14 55.1	1 58.20	-13.90	-0 11.69	+ 9.35	-1.98	-24.50	22 15 1.24	51 22 48.0
22 15 15.0	8.7	16 14.28	15 58.4	57 56.30	-12.88	-0 11.68	+ 8.34	-2.00	-24.50	22 16 2.96	50 26 49.9
22 16 12.4	8.9	17 10.44	16 45.9	19 34.50	-19.16	-0 11.70	+ 9.99	-1.98	-24.70	22 16 59.09	52 5 6.9
22 17 23.5	9.5	18 24.02	18 9.0	1 35.15	-12.17	-0 11.68	+ 8.32	-2.02	-24.50	22 18 12.70	50 23 11.8
22 18 27.9	9.0	19 26.30	19 1.3	56 22.10	-19.82	-0 11.69	+ 9.34	-2.02	-24.60	22 19 14.95	51 28 18.2
22 19 35.4	8.8	20 33.98	20 15.1	11 43.60	-15.06	-0 11.69	+ 9.18	-2.03	-24.60	22 20 22.63	51 13 1.3
22 20 47.6	7.7	21 46.06	21 24.6	41 18.90	-16.94	-0 11.70	+ 9.70	-2.04	-24.60	22 21 34.69	51 43 24.7
22 21 47.2	7.9	22 45.46	22 24.8	4 21.25	-16.45	-0 11.69	+ 9.20	-2.05	-24.60	22 22 34.10	51 20 22.4
22 23 13.6	7.8	24 13.34	23 47.5	32 31.20	-20.72	-0 11.69	+ 8.69	-2.06	-24.60	22 24 1.99	50 52 7.7
22 24 7.0	6.7	25 4.98	24 45.7	38 11.15	-15.19	-0 11.70	+ 9.73	-2.07	-24.70	22 24 53.60	51 46 34.3
ZONE 346, OCTOBER 21, 1874.											
21 16 45.5	8.4	17 36.58	17 24.0	6 27.00	-10.24	-0 10.70	+ 8.44	-1.40	-23.60	21 17 26.50	50 18 20.4
21 17 39.6	8.6	18 29.28	18 9.0	38 52.45	-15.99	-0 10.72	+ 9.95	-1.36	-22.80	21 18 19.17	51 45 51.6
21 17 41.8	9.0	18 31.40	18 37.3	38 52.45	+ 4.65	-0 10.72	+10.05	-1.36	-22.80	21 18 21.29	51 46 12.3
21 19 6.5	9.5	19 57.00	19 35.3	12 44.75	-17.30	-0 10.71	+ 9.38	-1.40	-22.80	21 19 46.89	51 11 57.5
21 20 8.0	8.7	20 57.82	20 40.5	34 55.55	-13.90	-0 10.71	+ 8.96	-1.42	-22.80	21 20 47.71	50 49 49.7
21 20 56.8	8.6	21 45.04	21 31.4	27 51.75	-10.18	-0 10.75	+12.56	-1.33	-23.30	21 21 34.86	53 57 0.4
21 22 25.7	9.1	23 15.46	22 46.0	50 42.70	-22.81	-0 10.72	+10.83	-1.39	-23.10	21 23 5.32	52 33 55.3
21 23 14.5	7.2	24 3.64	23 45.5	40 4.95	-13.95	-0 10.73	+11.06	-1.39	-23.10	21 23 53.48	52 44 42.2
21 24 5.5	8.6	24 55.20	24 37.4	52 47.35	-13.78	-0 10.72	+10.86	-1.41	-23.10	21 24 45.05	52 31 59.8
21 25 1.4	9.4	25 51.48	25 35.9	1 30.80	-12.11	-0 10.72	+10.78	-1.42	-23.20	21 25 41.33	52 23 17.9
21 25 4.6	6.8	25 53.72	25 27.5	1 30.80	-20.35	-0 10.72	+10.67	-1.42	-23.20	21 25 43.57	52 23 9.6
21 26 9.0	8.8	26 59.56	26 35.2	42 42.75	-19.66	-0 10.71	+ 8.81	-1.47	-23.10	21 26 49.44	50 41 56.6
21 27 43.8	9.0	28 34.88	28 12.7	52 51.30	-17.10	-0 10.72	+10.82	-1.44	-23.40	21 28 24.72	52 31 52.4
21 29 0.7	9.4	29 51.26	29 31.6	14 13.05	-15.37	-0 10.71	+10.39	-1.47	-23.40	21 29 41.10	52 10 32.0
21 30 2.2	9.4	30 52.42	30 30.2	21 19.85	-16.97	-0 10.72	+11.46	-1.45	-23.50	21 30 42.24	53 3 24.7
21 30 45.1	8.6	31 34.88	31 25.0	8 26.50	- 7.71	-0 10.71	+10.63	-1.48	-23.40	21 31 24.72	52 16 26.6
21 31 10.7	8.0	32 0.44	31 52.1	9 25.80	- 6.46	-0 10.71	+10.59	-1.48	-23.40	21 31 50.28	52 15 28.5
21 32 13.8	7.6	33 4.38	32 49.1	35 50.50	-11.76	-0 10.72	+11.28	-1.49	-23.50	21 32 54.19	52 48 59.2
21 32 51.0	9.1	33 42.08	33 25.9	17 28.45	-12.94	-0 10.70	+ 9.38	-1.54	-23.40	21 33 31.92	51 7 18.3
21 34 17.8	7.8	35 8.86	34 41.7	36 46.90	-21.40	-0 10.71	+10.00	-1.53	-23.50	21 34 58.69	51 47 51.9
21 35 40.4	8.1	36 32.80	36 6.8	39 10.60	-20.92	-0 10.70	+ 8.80	-1.57	-23.50	21 36 22.64	50 45 27.6
21 37 11.8	9.2	38 2.86	37 40.2	41 4.50	-17.48	-0 10.72	+11.14	-1.54	-23.70	21 37 52.65	52 43 39.4
21 38 14.3	7.6	39 6.38	38 50.1	34 39.10	-12.82	-0 10.71	+10.06	-1.57	-23.60	21 38 56.19	51 50 8.5
21 39 15.4	9.2	40 8.90	39 51.3	54 57.55	-14.24	-0 10.69	+ 8.57	-1.61	-23.60	21 39 58.74	50 29 47.2
21 40 19.6	9.0	41 11.86	40 53.6	35 56.25	-14.39	-0 10.71	+10.13	-1.59	-23.70	21 41 1.66	51 48 49.8
21 41 27.4	7.0	42 19.04	41 54.7	51 51.50	-19.22	-0 10.70	+ 9.76	-1.61	-23.70	21 42 8.85	51 32 49.5
21 42 57.9	9.3	43 50.62	43 28.0	15 58.65	-18.04	-0 10.70	+ 9.37	-1.64	-23.70	21 43 40.42	51 8 43.2
21 44 25.7	8.2	45 17.40	44 50.8	10 15.55	-20.25	-0 10.72	+11.64	-1.60	-24.00	21 45 7.16	53 14 26.1
21 45 41.1	9.0	46 35.54	46 17.1	36 18.35	-14.79	-0 10.70	+ 9.03	-1.67	-23.80	21 46 25.34	50 48 26.4
21 46 51.5	8.9	47 45.30	47 27.0	17 27.30	-14.30	-0 10.71	+10.41	-1.66	-24.00	21 47 35.06	52 7 19.2
21 48 54.4	8.8	49 47.72	49 26.5	14 28.20	-16.91	-0 10.69	+ 9.32	-1.70	-23.90	21 49 37.51	51 10 14.8
21 49 46.9	9.5	50 40.08	50 21.5	54 31.75	-14.41	-0 10.70	+10.77	-1.68	-24.10	21 50 29.84	52 30 15.0
21 50 40.1	9.0	51 34.32	51 18.7	54 16.25	-12.62	-0 10.68	+ 8.63	-1.73	-23.90	21 51 24.12	50 30 30.4
21 51 34.1	9.7	52 28.74	52 19.6	29 16.40	- 7.30	-0 10.69	+ 9.15	-1.69	-24.60	21 52 18.56	50 55 35.4
21 52 33.6	9.2	53 30.62	53 13.2	39 54.55	-14.01	-0 10.69	+ 8.91	-1.74	-24.60	21 53 20.40	50 44 50.4

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
21 53 34.2	8.0	54 26.74	54 20.8	45 53.65	- 4.45	-0 10.72	+12.29	-1.70	-24.30	21 54 16.44	53 39 4.6
21 54 44.6	8.7	55 37.80	55 14.1	56 14.90	-17.91	-0 10.72	+ 9.81	-1.71	-24.30	21 55 27.51	53 28 27.4
21 56 13.5	9.1	57 8.06	56 44.6	40 46.45	-18.93	-0 10.69	+ 8.92	-1.78	-24.10	21 56 57.83	50 43 54.3
21 57 28.5	9.5	58 23.38	57 56.9	58 21.85	-20.55	-0 10.70	+10.66	-1.76	-24.30	21 58 13.11	52 26 18.8
21 58 22.2	8.2	59 16.96	59 5.4	48 23.00	- 8.96	-0 10.70	+10.99	-1.77	-24.40	21 59 6.68	52 36 29.5
21 59 10.4	9.0	0 4.68	59 45.6	48 35.40	-14.76	-0 10.70	+10.93	-1.78	-24.40	21 59 54.40	52 36 11.3
22 0 10.8	8.8	1 6.64	0 59.0	13 27.30	- 5.93	-0 10.70	+10.56	-1.79	-24.40	22 0 56.37	52 11 27.9
22 1 16.9	8.2	2 11.28	1 46.7	14 10.85	-19.19	-0 10.70	+10.38	-1.81	-24.40	22 2 0.99	52 10 31.0
22 2 21.1	8.5	3 17.80	2 58.1	35 53.65	-15.84	-0 10.69	+ 9.04	-1.84	-24.20	22 3 7.54	50 48 50.4
22 3 31.9	8.5	4 28.24	4 13.5	14 58.70	-11.98	-0 10.68	+ 8.24	-1.86	-24.30	22 4 18.00	50 9 48.4
22 5 0.3	9.0	5 55.22	5 31.7	38 7.90	-18.08	-0 10.71	+11.11	-1.83	-24.50	22 5 44.91	52 46 35.8
22 5 58.3	8.6	6 53.86	6 40.2	2 27.25	-10.64	-0 10.70	+10.76	-1.85	-24.50	22 6 43.56	52 22 23.6
22 7 12.2	9.2	8 8.06	7 48.8	19 42.95	-14.75	-0 10.71	+11.46	-1.85	-24.60	22 7 57.74	53 5 4.4
22 8 9.7	7.8	9 5.84	8 50.5	38 24.25	-12.04	-0 10.70	+10.05	-1.89	-24.50	22 8 55.53	51 46 24.6
22 9 26.2	8.0	10 23.18	10 5.9	32 55.60	-13.89	-0 10.68	+ 9.08	-1.91	-24.50	22 10 12.90	50 51 50.5
22 11 28.9	9.1	12 26.26	12 1.5	7 40.15	-20.16	-0 10.67	+ 8.33	-1.94	-24.50	22 12 15.99	50 16 59.0
22 12 8.0	8.7	13 5.12	12 56.4	5 1.45	- 7.07	-0 10.67	+ 8.48	-1.95	-24.50	22 12 54.85	50 19 50.9
22 13 13.5	8.8	14 10.56	13 45.2	49 30.75	-20.52	-0 10.67	+ 8.63	-1.96	-24.60	22 14 0.28	50 35 8.3
22 14 13.8	7.8	15 11.43	15 44.0	2 37.90	+25.89	-0 10.68	+ 9.44	-1.95	-24.70	22 15 1.13	51 22 48.3
22 15 15.0	8.4	16 13.08	16 0.5	57 59.55	-10.21	-0 10.67	+ 8.62	-1.98	-24.60	22 16 2.79	50 26 49.9
22 16 12.4	8.9	17 9.26	16 45.7	19 35.25	-18.45	-0 10.69	+10.28	-1.96	-24.80	22 16 58.94	52 5 7.4
22 17 23.5	9.2	18 23.02	17 54.0	1 24.25	-23.53	-0 10.67	+ 8.43	-2.00	-24.70	22 18 12.73	50 23 11.6
22 18 27.9	8.8	19 25.22	19 7.4	56 28.05	-14.11	-0 10.68	+ 9.72	-2.00	-24.80	22 19 14.90	51 28 18.5
22 19 35.4	8.8	20 32.94	20 15.3	11 43.80	-14.03	-0 10.68	+ 9.50	-2.01	-24.80	22 20 22.62	51 13 2.6
ZONE 347, OCTOBER 22, 1874.											
21 29 54.4	8.3	30 43.58	30 17.3	39 58.30	-20.72	-0 9.65	+ 9.70	-1.47	-23.40	21 30 34.50	51 44 41.0
21 30 45.1	9.0	31 33.78	31 13.2	8 18.15	-16.04	-0 9.65	+10.37	-1.46	-23.50	21 31 24.70	52 16 26.4
21 31 37.5	9.2	32 27.04	32 13.0	37 5.85	-10.77	-0 9.67	+11.09	-1.45	-23.60	21 32 17.93	52 47 44.7
21 32 51.3	9.0	33 42.94	33 24.5	44 53.60	-14.20	-0 9.65	+10.80	-1.47	-23.70	21 33 33.85	52 39 53.1
21 33 42.8	6.8	34 32.58	34 20.9	23 55.65	- 8.95	-0 9.67	+11.27	-1.47	-23.70	21 34 23.46	53 0 56.9
21 34 54.1	8.2	35 43.88	35 29.9	34 51.45	-10.76	-0 9.67	+11.03	-1.49	-23.80	21 35 34.75	52 49 59.0
21 35 53.0	9.5	36 44.20	36 25.1	52 8.30	-14.78	-0 9.65	+10.73	-1.50	-23.80	21 36 35.10	52 32 37.9
21 37 26.5	9.3	38 18.00	38 0.7	14 23.95	-13.80	-0 9.64	+ 9.22	-1.56	-23.70	21 38 8.91	51 10 21.9
21 38 20.2	9.2	39 12.22	38 46.8	3 12.20	-20.61	-0 9.64	+ 8.30	-1.59	-23.60	21 39 3.13	50 21 26.1
21 38 40.1	7.9	39 31.40	38 50.2	3 12.20	-33.44	-0 9.64	+ 8.02	-1.59	-23.60	21 39 22.31	50 21 13.0
21 40 7.3	8.3	40 58.96	40 27.0	5 9.45	-24.88	-0 9.65	+10.40	-1.55	-23.90	21 40 49.84	52 19 26.4
21 40 50.1	8.3	41 40.78	42 22.7	5 58.15	+32.59	-0 9.65	+10.15	-1.56	-23.90	21 41 31.66	52 19 35.0
21 41 1.0	8.0	41 51.60	41 23.7	5 58.15	-21.69	-0 9.65	+10.41	-1.56	-23.90	21 41 42.48	52 18 41.0
21 41 58.7	9.4	42 51.02	42 43.5	36 57.15	- 5.90	-0 9.65	+10.01	-1.59	-23.90	21 42 41.89	51 47 57.4
21 43 7.3	7.5	43 57.30	43 35.5	54 10.35	-16.88	-0 9.65	+10.60	-1.57	-24.00	21 43 48.18	52 30 33.8
21 44 27.5	8.1	45 17.12	44 52.3	36 44.35	-18.64	-0 9.69	+12.07	-1.56	-24.20	21 45 7.93	53 47 59.3
21 45 15.9	7.4	46 8.34	45 51.6	59 48.25	-13.53	-0 9.64	+ 8.39	-1.65	-23.90	21 45 59.23	50 24 57.2
21 47 20.8	8.4	48 12.36	47 55.5	17 20.25	-12.90	-0 9.68	+11.39	-1.61	-24.20	21 48 3.17	53 7 28.6
21 48 36.0	9.2	49 27.04	49 37.4	9 5.75	+ 7.91	-0 9.68	+11.57	-1.62	-24.30	21 49 17.84	53 16 4.1
21 48 50.5	8.9	49 41.74	49 2.2	9 5.75	-30.05	-0 9.65	+11.18	-1.62	-24.30	21 49 32.58	53 15 25.7
21 49 56.4	8.7	50 52.28	50 32.8	31 16.55	-14.62	-0 9.68	+12.27	-1.62	-24.30	21 50 43.07	53 53 31.5
21 51 28.8	8.8	52 22.14	51 58.6	34 2.40	-18.88	-0 9.63	+ 8.82	-1.71	-24.10	21 52 13.00	50 50 38.2
21 52 28.9	8.6	53 22.44	53 1.4	58 11.60	-17.81	-0 9.63	+ 8.43	-1.73	-24.10	21 53 13.30	50 26 29.8
21 54 21.2	9.5	55 13.24	54 46.9	28 52.05	-19.70	-0 9.68	+12.15	-1.67	-24.50	21 55 4.01	53 55 50.8
21 55 59.3	8.5	56 53.76	56 31.4	56 26.55	-17.36	-0 9.64	+10.66	-1.72	-24.40	21 56 44.58	52 28 17.3
21 58 14.6	8.9	59 11.02	58 43.8	56 58.35	-21.08	-0 9.64	+10.57	-1.74	-24.50	21 59 1.84	52 27 41.7
21 59 32.0	8.6	0 24.02	0 1.4	16 6.15	-17.24	-0 9.67	+11.42	-1.74	-24.60	22 0 14.79	53 8 38.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s "	"	h m s	° ' "
22 0 38.9	6.8	1 32.42	1 13.6	23 51.40	-14.39	-0 9.66	+11.24	-1.75	-24.60	22 1 23.20	53 0 56.1
22 1 54.9	8.3	2 48.98	2 30.0	19 11.15	-15.18	-0 9.63	+ 9.14	-1.81	-24.50	22 2 39.80	51 5 33.6
22 3 16.3	8.2	4 9.28	3 48.8	44 25.60	-15.45	-0 9.67	+11.93	-1.77	-24.70	22 4 0.03	53 40 21.5
22 4 1.9	9.1	4 55.08	5 8.0	51 26.55	+ 9.75	-0 9.67	+11.96	-1.78	-24.70	22 4 45.83	53 33 45.8
22 4 8.8	8.0	5 1.40	4 34.5	51 26.55	-20.34	-0 9.67	+11.82	-1.78	-24.70	22 4 52.15	53 33 15.6
22 5 50.5	9.0	6 45.28	6 21.0	15 11.25	-18.53	-0 9.67	+11.45	-1.81	-24.80	22 6 36.02	53 9 32.3
22 7 2.4	8.9	7 55.70	7 38.0	54 36.95	-13.40	-0 9.67	+11.76	-1.82	-24.80	22 7 46.43	53 30 12.1
22 7 55.5	7.0	8 49.92	8 25.6	52 36.40	-18.81	-0 9.64	+10.68	-1.84	-24.90	22 8 40.70	52 32 6.1
22 8 55.7	9.0	9 49.84	9 28.1	20 7.15	-16.48	-0 9.67	+11.39	-1.85	-24.80	22 9 40.57	53 4 38.5
22 9 55.1	9.8	10 49.54	10 31.5	44 4.15	-13.56	-0 9.67	+11.98	-1.84	-24.90	22 10 40.27	53 40 45.0
22 10 46.9	8.7	11 43.92	11 27.2	11 6.25	-13.30	-0 9.63	+ 9.46	-1.90	-24.70	22 11 34.70	51 13 40.8
22 11 59.3	9.2	12 55.12	12 37.4	45 0.60	-13.97	-0 9.64	+ 9.89	-1.90	-24.80	22 12 45.89	51 39 46.2
22 13 3.1	6.7	13 57.50	13 33.6	22 52.30	-18.71	-0 9.63	+10.13	-1.91	-24.90	22 13 48.33	52 1 49.9
22 14 15.1	9.3	15 11.02	14 53.5	45 3.90	-13.81	-0 9.63	+ 9.90	-1.94	-24.90	22 15 1.77	51 39 43.1
22 16 12.4	8.9	17 8.34	16 47.6	19 38.15	-16.18	-0 9.63	+10.17	-1.94	-24.90	22 16 59.10	52 5 6.8
22 17 28.6	8.6	18 25.24	18 8.8	29 48.40	+ 3.16	-0 9.62	+ 8.98	-1.97	-24.90	22 18 16.01	50 54 58.4
22 18 40.1	8.6	19 35.92	19 24.5	27 17.75	- 8.94	-0 9.63	+10.19	-1.96	-25.00	22 19 26.68	51 57 34.4
22 19 59.2	7.8	20 55.02	20 31.5	36 28.85	-18.49	-0 9.63	+ 9.95	-1.98	-25.00	22 20 45.77	51 48 13.6
22 22 6.2	7.4	23 2.88	22 53.7	28 36.00	- 7.38	-0 9.62	+ 9.07	-2.02	-25.00	22 22 53.64	50 56 16.8
22 23 13.6	7.2	24 11.30	23 52.0	32 36.70	-15.50	-0 9.62	+ 8.95	-2.03	-25.00	22 24 2.09	50 52 7.8
22 24 45.5	9.3	25 42.58	25 19.1	50 24.60	-18.99	-0 9.62	+ 8.67	-2.05	-25.00	22 25 33.33	50 34 16.2
.....	9.5	26 50.48	26 40.1	2 47.75	- 8.26	-0 9.63	+ 9.57	-2.05	-25.00	22 26 41.21	51 22 4.8
22 27 11.6	9.4	28 9.72	27 54.0	51 49.75	-12.69	-0 9.62	+ 8.68	-2.08	-25.00	22 28 0.46	50 32 57.5
22 28 9.4	8.5	29 7.04	28 50.1	24 25.60	-13.23	-0 9.63	+10.12	-2.07	-25.20	22 28 57.75	52 0 22.4
22 29 22.5	8.7	30 20.20	29 59.4	8 4.55	-16.55	-0 9.62	+ 9.41	-2.09	-25.10	22 30 10.93	51 16 39.5
22 30 51.0	9.6	31 49.48	31 29.0	34 39.15	-16.12	-0 9.63	+ 9.92	-2.10	-25.20	22 31 40.18	51 50 5.8
22 31 51.6	8.9	32 49.52	32 32.8	22 29.50	-13.07	-0 9.63	+10.24	-2.11	-25.20	22 32 40.22	52 2 18.8
22 33 8.9	8.6	34 7.24	34 32.3	54 38.63	+20.31	-0 9.62	+ 8.47	-2.14	-25.10	22 33 57.96	50 30 41.5
22 33 31.0	5.5	34 29.78	33 39.2	54 7.00	-40.95	-0 9.62	+ 7.89	-2.14	-25.20	22 34 20.50	50 30 11.2
22 34 41.1	8.7	35 40.21	35 21.4	0 14.60	-15.25	-0 9.62	+ 8.53	-2.15	-25.20	22 35 30.93	50 24 30.0
22 36 5.1	8.5	37 4.40	36 38.6	13 25.85	-20.13	-0 9.62	+10.28	-2.15	-25.30	22 36 55.09	52 11 15.5
22 37 6.9	9.5	38 6.04	37 49.4	28 54.05	-13.02	-0 9.62	+10.07	-2.17	-25.30	22 37 56.72	51 55 54.3
22 38 33.4	8.9	39 32.22	39 9.7	19 16.75	-17.59	-0 9.62	+10.22	-2.18	-25.40	22 39 22.90	52 5 27.1
22 39 32.4	7.8	40 30.72	40 15.9	41 47.05	-11.41	-0 9.64	+11.04	-2.18	-25.40	22 40 21.37	52 43 3.8
22 40 42.1	7.0	41 40.44	41 22.0	25 55.55	-14.10	-0 9.64	+11.34	-2.19	-25.40	22 41 31.09	52 58 53.0
22 41 35.0	8.8	42 34.94	42 4.2	24 37.90	-23.35	-0 9.64	+11.09	-2.20	-25.40	22 42 25.58	53 0 1.1
ZONE 348, OCTOBER 26, 1874.											
21 29 54.4	8.3	30 40.64	30 17.1	40 1.20	-18.51	-0 6.91	+ 9.61	-1.36	-23.90	21 30 34.41	51 44 40.0
21 30 45.1	8.8	31 30.82	31 6.1	8 15.25	-19.22	-0 6.91	+10.19	-1.35	-24.00	21 31 24.59	52 16 25.8
21 31 37.5	9.2	32 24.22	32 15.1	37 8.50	- 7.00	-0 6.92	+10.95	-1.34	-24.10	21 32 17.97	52 47 45.4
21 32 51.3	8.8	33 40.06	33 18.2	44 50.85	-16.90	-0 6.91	+10.62	-1.36	-24.10	21 33 33.82	52 39 52.9
21 33 42.8	7.5	34 29.62	34 13.2	23 51.45	-12.55	-0 6.92	+12.10	-1.35	-24.20	21 34 23.37	53 0 58.1
21 34 54.1	8.5	35 40.90	35 18.2	34 45.45	-17.45	-0 6.92	+10.81	-1.35	-24.20	21 35 34.66	52 49 58.0
21 35 53.0	9.1	36 41.20	36 50.0	52 29.00	+ 6.81	-0 6.91	+10.68	-1.39	-24.20	21 36 34.95	52 32 38.6
21 37 26.5	9.0	38 15.06	37 51.3	14 19.20	-19.00	-0 6.90	+ 9.03	-1.45	-24.10	21 38 8.82	51 10 21.1
21 38 20.2	9.2	39 9.26	39 0.2	3 23.05	- 7.38	-0 6.89	+ 8.33	-1.48	-24.10	21 39 3.03	50 21 28.2
21 38 40.1	8.3	39 28.44	39 4.6	3 23.05	-19.32	-0 6.89	+ 8.21	-1.48	-24.10	21 39 22.21	50 21 16.2
21 40 7.3	8.6	40 56.08	40 40.5	5 22.45	-12.13	-0 6.91	+10.47	-1.44	-24.40	21 40 49.81	52 19 26.0
21 40 50.1	8.2	41 37.88	.....	.....	.....	-0 6.91	.....	-1.45	.....	21 41 31.61	.....
21 41 1.0	7.8	41 48.82	41 24.7	6 2.20	-18.74	-0 6.91	+10.35	-1.45	-24.40	21 41 42.55	52 18 39.6
21 41 58.7	9.5	42 48.00	42 43.5	37 0.85	- 3.54	-0 6.91	+ 9.90	-1.48	-24.40	21 42 41.72	51 47 55.7
21 43 7.3	7.5	43 54.42	43 37.3	54 12.95	-13.24	-0 6.91	+10.52	-1.47	-24.50	21 43 48.14	52 30 34.5

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
21 44 27.5	8.3	45 14.22	44 52.8	36 47.10	-16.08	-0 6.95	+11.99	-1.45	-24.70	21 45 7.88	53 47 58.8
21 45 15.9	7.5	46 5.40	45 42.4	59 42.45	-18.65	-0 6.89	+ 8.25	-1.55	-24.40	21 45 59.14	50 24 57.5
21 47 20.8	8.7	48 9.46	47 49.8	17 17.90	-15.04	-0 6.94	+11.24	-1.50	-24.70	21 48 3.12	53 7 28.5
21 51 28.8	8.8	52 19.28	51 58.2	34 4.75	-16.95	-0 6.91	+ 8.78	-1.61	-24.60	21 52 12.96	50 50 37.5
21 52 28.9	8.7	53 19.64	53 5.9	58 17.25	-11.10	-0 6.90	+ 8.41	-1.63	-24.60	21 53 13.33	50 26 30.6
21 54 21.2	9.6	55 10.30	54 41.8	28 50.30	-21.35	-0 6.96	+11.98	-1.56	-25.10	21 55 3.90	53 55 50.4
21 55 59.3	9.0	56 51.06	56 28.7	56 27.15	-17.36	-0 6.92	+10.54	-1.61	-25.00	21 56 44.71	52 28 16.3
21 58 14.6	9.0	59 8.04	58 49.3	57 5.75	-14.49	-0 6.92	+10.57	-1.63	-25.10	21 59 1.69	52 27 40.6
21 59 32.0	8.5	0 21.20	0 5.1	16 10.60	-12.28	-0 6.93	+11.34	-1.64	-25.20	22 0 14.81	53 8 38.7
22 0 38.9	6.9	1 29.54	1 11.8	23 50.95	-13.55	-0 6.93	+11.11	-1.64	-25.20	22 1 23.16	53 0 56.9
22 1 54.9	8.3	2 46.22	2 29.4	19 12.40	-13.42	-0 6.91	+ 9.04	-1.71	-25.10	22 2 39.86	51 5 33.7
22 3 16.3	8.9	4 6.54	3 48.0	44 27.45	-13.95	-0 6.94	+11.80	-1.66	-25.30	22 4 0.13	53 40 20.7
22 4 1.9	9.2	4 52.36	5 14.5	51 32.65	+16.70	-0 6.94	+11.72	-1.68	-25.30	22 4 45.94	53 33 46.1
22 4 8.8	8.3	4 58.44	4 38.4	51 32.65	-15.12	-0 6.94	+11.74	-1.68	-25.30	22 4 52.02	53 33 14.3
22 5 50.5	9.0	6 42.60	6 17.0	15 11.25	-19.53	-0 6.94	+11.27	-1.70	-25.40	22 6 36.18	53 9 30.8
22 7 2.4	9.2	7 52.88	7 33.6	54 35.95	-14.61	-0 6.94	+11.60	-1.71	-25.40	22 7 46.45	53 30 11.4
22 7 55.5	7.1	8 47.00	8 29.9	52 43.20	-13.23	-0 6.92	+10.62	-1.73	-25.40	22 8 40.61	52 32 4.6
22 8 55.7	8.7	9 46.98	9 28.8	20 9.80	-13.91	-0 6.94	+11.29	-1.74	-25.40	22 9 40.55	53 4 38.0
22 9 55.1	9.8	10 46.66	10 42.2	44 15.60	- 3.39	-0 6.94	+11.89	-1.74	-25.50	22 10 40.22	53 40 43.3
22 10 46.9	8.8	11 41.02	11 29.8	11 9.25	- 8.92	-0 6.91	+ 9.38	-1.80	-25.30	22 11 34.62	51 13 41.8
22 11 59.3	9.3	12 52.02	12 33.2	44 59.70	-14.84	-0 6.91	+ 9.61	-1.81	-25.40	22 12 45.61	51 39 45.6
22 13 3.1	7.0	13 54.66	13 32.0	22 53.30	-17.77	-0 6.92	+10.01	-1.81	-25.50	22 13 48.30	52 1 49.4
22 14 15.1	9.1	15 8.22	14 50.4	45 1.75	-14.05	-0 6.91	+ 9.77	-1.84	-25.50	22 15 1.79	51 39 44.5
22 16 12.4	8.8	17 5.44	16 42.9	19 35.55	-17.59	-0 6.92	+10.03	-1.84	-25.60	22 16 59.01	52 5 7.4
22 17 28.6	8.6	18 22.30	17 57.1	29 39.40	-20.21	-0 6.91	+ 8.77	-1.88	-25.50	22 18 15.87	50 54 59.8
22 18 40.1	8.7	19 32.98	19 12.5	27 8.95	-16.07	-0 6.92	+ 9.98	-1.87	-25.60	22 19 26.54	51 57 35.6
22 19 59.2	7.5	20 52.02	20 26.2	36 26.25	-20.30	-0 6.92	+ 9.78	-1.89	-25.70	22 20 45.57	51 48 13.8
22 22 6.2	7.0	22 59.92	22 32.4	28 18.40	-22.05	-0 6.91	+ 8.80	-1.93	-25.60	22 22 53.48	50 56 19.1
22 23 13.6	7.5	24 8.36	23 48.6	32 35.00	-15.90	-0 6.91	+ 8.84	-1.94	-25.60	22 24 1.91	50 52 8.7
22 24 45.5	9.3	25 39.72	25 20.5	50 28.90	-15.52	-0 6.90	+ 8.60	-1.96	-25.60	22 25 33.28	50 34 15.0
.....	9.9	26 47.52	26 33.8	2 42.55	-10.88	-0 6.91	+ 9.42	-1.96	-25.70	22 26 41.06	51 22 6.8
22 27 11.6	9.5	28 6.78	27 51.2	51 48.55	-12.61	-0 6.90	+ 8.56	-1.99	-25.70	22 28 0.33	50 32 58.2
22 28 9.4	9.0	29 4.02	28 49.1	24 26.95	-11.67	-0 6.92	+10.03	-1.98	-25.80	22 28 57.53	52 0 22.1
22 29 22.5	8.9	30 17.36	29 54.2	8 2.95	-18.46	-0 6.91	+ 9.24	-2.00	-25.80	22 30 10.89	51 16 38.6
22 30 51.0	9.7	31 46.58	31 28.9	34 41.95	-13.92	-0 6.92	+ 9.81	-2.02	-25.90	22 31 40.07	51 50 4.7
22 31 51.6	9.3	32 46.60	32 27.2	22 28.30	-15.19	-0 6.92	+10.09	-2.02	-25.90	22 32 40.10	52 2 17.3
22 39 32.4	7.9	40 27.82	40 17.2	41 49.90	- 8.17	-0 6.93	+10.94	-2.10	-26.10	22 40 21.26	52 43 3.7
22 40 42.1	7.9	41 37.54	41 9.9	25 47.40	-21.14	-0 6.94	+11.09	-2.10	-26.20	22 41 30.98	52 58 53.3
22 41 35.0	9.0	42 32.26	42 9.9	24 43.45	-17.15	-0 6.94	+11.07	-2.12	-26.20	22 42 25.68	53 0 1.2
ZONE 349, NOVEMBER 4, 1874.											
22 1 54.9	8.5	2 41.10	2 24.2	19 12.20	-13.41	-0 2.12	+ 9.20	-1.48	-26.10	22 2 39.76	51 5 32.8
22 2 30.3	8.8	3 17.24	3 5.8	24 24.84	- 9.06	-0 2.12	+ 9.14	-1.48	-26.10	22 3 15.91	51 0 24.5
22 3 31.9	8.3	4 19.30	3 55.8	14 50.05	-19.01	-0 2.11	+ 8.11	-1.52	-26.00	22 4 17.97	50 9 48.4
22 4 30.4	9.0	5 17.82	5 8.3	6 24.75	- 7.66	-0 2.10	+ 8.51	-1.53	-26.10	22 5 16.49	50 18 25.4
22 5 29.7	8.8	6 17.98	6 0.1	37 5.35	-13.98	-0 2.11	+10.07	-1.50	-26.30	22 6 16.63	51 47 39.9
22 6 28.9	9.0	7 15.94	7 2.2	47 50.05	-10.74	-0 2.11	+ 9.88	-1.51	-26.40	22 7 14.59	51 36 58.2
22 7 34.7	8.0	8 20.42	7 59.7	2 45.45	-15.60	-0 2.13	+11.74	-1.48	-26.60	22 8 19.04	53 21 59.6
22 8 48.9	7.0	9 37.38	9 13.5	5 29.95	-18.45	-0 2.11	+10.65	-1.52	-26.50	22 9 36.02	52 19 11.4
22 15 51.9	9.0	16 40.46	16 29.5	8 24.85	- 8.30	-0 2.12	+11.70	-1.58	-26.90	22 16 39.05	53 16 27.5
22 58 16.0	8.6	59 9.28	58 37.9	3 39.80	-23.67	-0 2.09	+11.59	-2.11	-28.00	22 59 7.68	53 20 57.3
22 59 29.0	9.0	0 22.38	59 58.7	4 15.45	-17.87	-0 2.09	+11.68	-2.12	-28.10	23 0 20.78	53 20 27.3
23 0 39.5	8.8	1 32.80	1 10.8	20 28.30	-16.30	-0 2.10	+12.60	-2.13	-28.20	23 1 31.18	54 4 17.0

R. A. 1855.o. According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.o.	Mean Dec. 1875.o.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
23 1 36.3	8.8	2 29.90	2 14.2	45 45.75	-11.75	-0 2.10	+12.20	-2.15	-28.10	23 2 28.27	53 39 3.9
23 2 39.7	9.2	3 34.54	3 17.6	7 46.30	-13.64	-0 2.06	+ 8.39	-2.20	-27.80	23 3 32.96	50 16 57.9
23 3 30.1	8.8	4 29.84	4 16.2	7 8.25	-10.74	-0 2.07	+ 9.56	-2.20	-27.90	23 4 28.24	51 17 40.0
23 4 25.4	8.8	5 21.26	5 4.4	9 42.95	-13.36	-0 2.07	+ 9.38	-2.21	-28.00	23 5 19.66	51 15 2.4
23 5 38.2	8.9	6 32.22	6 3.1	25 7.55	-21.60	-0 2.10	+12.44	-2.20	-28.20	23 6 30.57	53 59 32.4
23 7 37.3	8.0	8 32.48	8 7.9	18 13.20	-18.65	-0 2.10	+11.42	-2.23	-28.20	23 8 30.83	53 6 28.8
23 8 44.1	8.5	9 39.04	9 9.9	43 58.55	-21.76	-0 2.10	+11.94	-2.24	-28.30	23 9 37.38	53 40 40.7
23 9 41.7	9.2	10 36.70	10 10.8	41 18.45	-19.36	-0 2.10	+12.15	-2.24	-28.30	23 10 35.04	53 43 23.5
23 10 37.2	9.0	11 33.67	11 22.7	31 48.15	- 8.19	-0 2.10	+12.55	-2.25	-28.30	23 11 32.01	53 53 5.4
ZONE 350, NOVEMBER 7, 1874.											
22 1 54.9	8.4	2 38.02	2 52.5	19 38.40	+11.50	+0 0.85	+ 9.31	-1.39	-26.30	22 2 39.74	51 5 32.2
22 3 31.9	9.0	4 16.24	3 59.4	14 57.00	-13.59	+0 0.86	+ 8.24	-1.44	-26.30	22 4 17.96	50 9 47.5
22 4 30.4	9.4	5 14.70	4 53.6	6 17.20	-17.02	+0 0.86	+ 8.49	-1.45	-26.30	22 5 16.41	50 18 24.2
22 5 29.7	9.2	6 14.92	5 51.7	37 3.50	-18.12	+0 0.84	+10.11	-1.41	-26.60	22 6 16.61	51 47 38.2
22 6 28.9	9.4	7 12.60	6 55.5	47 50.00	-13.41	+0 0.85	+ 9.94	-1.43	-26.60	22 7 14.29	51 36 56.3
22 7 34.7	9.2	8 17.44	8 7.0	2 55.25	- 7.84	+0 0.82	+11.93	-1.38	-26.90	22 8 19.11	53 21 58.3
22 8 48.9	8.8	9 34.28	9 5.8	5 27.35	-22.00	+0 0.85	+10.68	-1.43	-26.80	22 9 35.97	52 19 10.9
22 9 45.5	9.4	10 30.70	10 16.0	58 33.20	-11.81	+0 0.86	+ 8.61	-1.51	-26.60	22 10 32.38	50 26 13.5
22 10 47.7	8.8	11 29.70	11 10.5	5 33.25	-14.49	+0 0.83	+11.91	-1.44	-27.00	22 11 31.34	53 19 13.7
22 11 59.3	9.4	12 43.90	12 35.1	45 7.95	- 6.89	+0 0.86	+10.16	-1.50	-26.80	22 12 45.57	51 39 45.1
22 13 3.1	7.6	13 46.56	13 27.9	22 56.50	-14.53	+0 0.85	+10.38	-1.50	-26.90	22 13 48.28	52 1 49.0
22 13 54.2	9.7	14 39.44	14 27.2	9 0.50	- 9.64	+0 0.86	+ 9.54	-1.54	-26.90	22 14 41.09	51 15 49.1
22 14 58.0	9.3	15 45.50	15 27.3	27 58.60	-14.48	+0 0.86	+ 9.17	-1.56	-26.90	22 15 47.15	50 56 45.8
22 15 51.9	9.5	16 37.42	16 25.1	8 25.50	- 9.29	+0 0.83	+11.79	-1.50	-27.30	22 16 39.04	53 16 26.4
22 17 49.0	8.7	18 34.42	18 18.3	25 34.45	-12.80	+0 0.87	+ 9.33	-1.59	-27.00	22 18 36.06	50 59 11.8
22 19 0.2	8.0	19 45.30	19 30.3	18 17.30	-11.63	+0 0.86	+10.50	-1.58	-27.30	22 19 46.92	52 6 31.1
22 19 45.1	9.1	20 30.72	20 15.0	13 36.65	-12.16	+0 0.86	+10.57	-1.58	-27.30	22 20 32.35	52 11 11.3
22 20 23.8	8.8	21 9.44	20 59.7	52 38.00	- 7.79	+0 0.87	+ 8.78	-1.63	-27.10	22 21 11.07	50 32 12.8
22 22 6.2	8.5	22 51.74	22 17.8	4 42.40	-26.16	+0 0.86	+10.44	-1.61	-27.40	22 22 53.35	52 19 51.4
22 23 22.9	8.4	24 8.50	23 39.8	16 49.70	-22.25	+0 0.86	+10.42	-1.63	-27.40	22 24 10.10	52 7 48.0
22 24 7.0	6.3	24 51.80	24 34.6	38 11.90	-13.44	+0 0.86	+10.11	-1.64	-27.50	22 24 53.41	51 46 34.3
22 25 21.3	8.0	26 7.94	25 37.0	10 44.05	-24.96	+0 0.88	+ 8.31	-1.70	-27.20	22 26 9.55	50 13 49.2
22 26 29.0	9.0	27 15.36	26 48.5	7 35.45	-21.25	+0 0.87	+ 9.47	-1.68	-27.40	22 27 16.97	51 17 2.4
22 27 34.1	9.1	28 21.52	27 50.2	47 46.40	-24.00	+0 0.86	+10.89	-1.66	-27.60	22 28 23.11	52 36 50.0
22 29 8.0	8.8	29 54.76	29 31.3	4 2.85	-18.13	+0 0.87	+10.66	-1.69	-27.60	22 29 56.35	52 20 39.3
22 29 48.9	8.7	30 35.08	30 22.2	19 0.60	-10.01	+0 0.87	+10.47	-1.71	-27.60	22 30 36.66	52 5 49.5
22 30 58.0	8.3	31 45.80	31 24.4	56 53.85	-17.20	+0 0.88	+ 8.65	-1.76	-27.40	22 31 47.38	50 27 47.4
22 32 25.7	9.0	33 12.68	32 46.1	41 3.15	-20.80	+0 0.87	+10.04	-1.75	-27.60	22 33 14.25	51 43 35.8
22 33 44.7	8.7	34 31.86	34 6.6	58 29.30	-19.91	+0 0.89	+ 9.62	-1.78	-27.60	22 34 33.43	51 26 10.1
22 34 41.1	9.2	35 29.22	35 16.9	0 16.90	- 9.90	+0 0.89	+ 8.74	-1.80	-27.50	22 35 30.80	50 24 31.8
22 36 8.8	9.4	36 56.92	36 40.0	30 8.65	-12.87	+0 0.86	+11.51	-1.77	-27.90	22 36 58.45	52 54 39.5
22 37 6.9	9.8	37 55.22	37 46.3	28 59.00	- 6.93	+0 0.88	+10.33	-1.80	-27.80	22 37 56.77	51 55 54.0
22 38 33.4	9.0	39 21.34	38 57.6	19 14.55	-18.38	+0 0.88	+10.37	-1.82	-27.80	22 39 22.88	52 5 27.1
22 39 34.9	7.0	40 22.10	40 1.8	10 43.00	-15.70	+0 0.88	+10.70	-1.82	-27.90	22 40 23.65	52 14 1.6
22 40 30.3	9.1	41 17.76	40 58.8	49 58.20	-14.58	+0 0.88	+10.94	-1.83	-28.00	22 41 19.29	52 34 47.7
22 41 35.9	9.0	42 24.52	41 59.1	15 3.90	-19.23	+0 0.88	+10.60	-1.85	-28.00	22 42 26.05	52 9 37.0
22 42 42.4	9.0	43 30.92	43 14.5	12 7.60	-12.97	+0 0.89	+ 9.53	-1.88	-27.90	22 43 32.46	51 12 38.7
22 43 32.3	...	44 21.75	44 0.5	28 54.35	-16.51	+0 0.88	+10.22	-1.88	-28.00	22 44 23.27	51 55 49.0
22 52 55.0	7.7	53 45.54	53 11.3	46 31.00	-26.80	+0 0.89	+ 9.79	-2.00	-28.20	22 53 47.02	51 38 1.7
22 53 43.3	9.1	54 32.60	54 25.8	41 41.00	- 5.32	+0 0.90	+10.16	-2.01	-28.20	22 54 34.09	51 43 13.5
22 55 23.8	9.5	56 18.48	55 54.3	38 48.50	-18.49	+0 0.88	+11.13	-2.01	-28.40	22 56 19.94	52 45 53.7
22 56 27.4	8.0	57 17.44	56 55.7	50 18.15	-16.65	+0 0.90	+11.09	-2.03	-28.40	22 57 18.91	52 34 25.9

R. A. 1855.0 According to B. D.	Obs Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	^s	^s	["]	^h ^m ^s	[°] ['] ["]
22 58 16.0	8.5	59 6.10	58 39.8	3 43.30	-19.83	+0 0.87	+11.75	-2.04	-28.50	22 59 7.53	53 20 58.1
22 59 29.0	9.0	0 19.16	59 57.2	4 17.55	-16.59	+0 0.87	+11.81	-2.06	-28.50	23 0 20.58	53 20 27.2
23 0 39.5	9.0	1 29.54	1 8.6	20 29.80	-15.49	+0 0.86	+12.75	-2.06	-28.60	23 1 30.95	54 4 16.9
23 1 36.3	8.8	2 26.68	2 7.3	45 44.40	-14.52	+0 0.87	+12.29	-2.08	-28.60	23 2 28.09	53 39 2.8
23 2 39.7	9.0	3 31.46	3 12.0	7 45.00	-15.73	+0 0.93	+ 8.45	-2.14	-29.20	23 3 32.93	50 16 56.6
23 3 30.1	8.8	4 26.56	4 0.7	6 59.10	-20.45	+0 0.92	+ 9.53	-2.13	-29.40	23 4 28.02	51 17 38.7
23 4 25.4	8.6	5 18.12	5 4.5	9 45.05	-10.75	+0 0.92	+ 9.50	-2.14	-29.40	23 5 19.58	51 15 2.4
23 5 38.2	8.9	6 29.10	6 9.0	25 15.10	-14.92	+0 0.87	+12.69	-2.12	-28.70	23 6 30.50	53 59 32.1
23 8 44.1	8.0	9 35.88	9 24.7	44 13.10	- 8.38	+0 0.88	+12.24	-2.18	-28.70	23 9 37.26	53 40 40.3
23 9 41.7	8.7	10 33.98	10 21.5	41 30.80	- 9.34	+0 0.88	+12.38	-2.19	-28.70	23 10 35.35	53 43 21.8
23 10 37.2	9.0	11 30.52	11 9.5	31 39.75	-15.63	+0 0.88	+12.48	-2.19	-28.80	23 11 31.90	53 53 6.6
23 11 35.1	8.8	12 27.44	12 10.3	58 58.00	-12.86	+0 0.89	+11.94	-2.21	-28.70	23 12 28.82	53 25 50.6
23 12 21.4	7.5	13 13.60	13 19.7	33 46.05	+ 4.54	+0 0.88	+10.32	-2.22	-28.80	23 13 14.96	53 51 18.3
23 13 54.3	8.8	14 46.62	14 17.6	31 4.10	-21.57	+0 0.88	+12.47	-2.24	-28.80	23 14 47.97	53 53 36.3
23 15 30.4	9.0	16 24.16	.....	.....	.....	+0 0.89	.....	-2.25	.....	23 16 25.53	.....
23 16 58.9	7.3	17 51.40	17 21.0	3 54.75	-22.92	+0 0.89	+11.69	-2.29	-28.90	23 17 52.74	53 20 43.5
23 17 28.8	9.1	18 23.22	18 44.4	24 53.85	+15.74	+0 0.88	+12.49	-2.29	-28.90	23 18 24.55	54 0 23.8
23 18 26.7	8.8	19 20.64	19 16.1	39 39.60	- 3.59	+0 0.93	+ 8.98	-2.32	-28.50	23 19 22.03	50 45 15.7
23 20 5.4	8.6	20 59.38	20 38.5	32 25.85	-15.56	+0 0.89	+12.44	-2.32	-28.90	23 21 0.71	53 52 20.5

ZONE 351, NOVEMBER 9, 1874.

23 8 0.5	9.0	8 55.16	8 33.3	48 26.40	-16.80	+0 0.65	+10.57	-2.12	-28.90	23 8 56.37	52 36 16.5
23 11 35.1	9.0	12 27.68	12 14.5	58 57.70	- 9.93	+0 0.63	+11.51	-2.17	-29.00	23 12 28.84	53 25 52.9
23 12 21.4	7.0	13 13.80	13 0.9	33 29.65	- 9.61	+0 0.63	+11.98	-2.17	-29.10	23 13 14.96	53 51 21.7
23 13 54.3	9.0	14 46.92	14 21.7	31 4.00	-18.75	+0 0.63	+12.03	-2.19	-29.10	23 14 48.07	53 53 38.3
23 15 30.4	9.0	16 24.54	16 7.9	45 50.25	-12.38	+0 0.63	+12.05	-2.22	-29.20	23 16 25.68	53 38 58.3
23 16 58.9	7.1	17 51.72	17 20.7	3 52.90	-23.37	+0 0.64	+11.23	-2.24	-29.10	23 17 52.86	53 20 44.0
23 18 11.6	9.2	19 6.68	18 43.0	35 43.25	-17.67	+0 0.64	+11.97	-2.25	-29.20	23 19 7.82	53 49 0.0
23 18 51.0	7.8	19 43.14	19 33.3	40 34.60	- 7.15	+0 0.63	+13.06	-2.25	-29.30	23 19 44.26	54 44 20.2
23 20 5.4	8.8	20 59.70	20 32.7	32 19.35	-20.10	+0 0.64	+11.91	-2.26	-29.20	23 21 0.84	53 52 21.4
23 20 32.6	8.8	21 27.84	21 33.0	12 41.50	+ 3.93	+0 0.65	+11.38	-2.29	-29.20	23 21 28.97	53 12 22.8
23 21 51.7	9.1	22 47.44	22 32.1	6 48.40	-12.34	+0 0.68	+ 8.23	-2.32	-28.80	23 22 48.61	50 17 56.9
23 22 47.0	8.9	23 41.48	23 24.6	31 5.55	-13.16	+0 0.67	+10.04	-2.32	-29.00	23 23 42.63	51 53 40.6
23 24 10.9	9.0	25 6.18	24 40.2	13 33.10	-19.67	+0 0.65	+11.14	-2.30	-29.20	23 25 7.33	53 11 7.4
23 25 6.8	8.7	26 0.76	25 43.4	5 0.05	-13.12	+0 0.65	+11.58	-2.35	-29.20	23 26 1.87	53 19 47.5
23 25 57.9	8.3	26 53.18	26 32.8	51 39.05	-15.30	+0 0.64	+11.72	-2.36	-29.20	23 26 54.27	53 33 6.4
23 27 17.4	8.1	28 12.30	27 44.4	1 58.40	-21.01	+0 0.64	+11.41	-2.37	-29.20	23 28 13.39	53 22 41.1
23 28 35.8	8.5	29 31.20	29 9.2	5 12.00	-16.59	+0 0.65	+11.53	-2.39	-29.20	23 29 32.29	53 19 32.0
23 29 33.4	9.7	30 29.64	30 9.4	25 27.55	-14.03	+0 0.64	+12.23	-2.40	-29.30	23 30 30.72	53 59 19.7
23 30 44.6	8.8	31 40.30	31 15.4	45 54.45	-18.81	+0 0.64	+11.79	-2.42	-29.20	23 31 41.37	53 38 47.7
23 31 56.1	7.5	32 51.40	32 31.0	39 44.40	-15.23	+0 0.64	+11.76	-2.43	-29.30	23 32 52.47	53 45 1.2
23 32 32.0	9.1	33 28.26	33 32.5	46 13.75	+ 3.36	+0 0.68	+ 8.70	-2.46	-29.00	23 33 29.36	50 38 47.7
23 34 53.4	8.2	35 49.28	35 26.5	24 27.00	-16.92	+0 0.64	+12.01	-2.47	-29.30	23 35 50.33	54 0 17.2
23 35 37.8	7.5	36 33.72	36 17.3	40 40.70	-13.11	+0 0.67	+ 8.74	-2.50	-29.00	23 36 34.79	50 44 4.3
23 37 41.5	8.0	38 38.50	38 17.5	11 26.45	-16.97	+0 0.68	+ 8.11	-2.53	-28.90	23 38 39.57	50 13 14.2
23 38 51.0	8.3	39 47.42	39 21.2	22 10.70	-19.42	+0 0.64	+12.13	-2.52	-29.30	23 39 48.45	54 2 31.1
23 39 42.1	8.3	40 38.86	40 18.4	54 15.25	-15.39	+0 0.64	+11.55	-2.53	-29.30	23 40 39.89	53 30 30.0
23 41 15.4	7.8	42 12.88	42 5.8	24 39.35	- 5.27	+0 0.64	+12.13	-2.55	-29.30	23 42 13.90	54 0 16.6
23 42 28.9	8.5	43 26.20	43 10.9	22 52.45	-11.35	+0 0.64	+12.22	-2.57	-29.30	23 43 27.21	54 1 57.6
23 43 27.0	7.0	44 25.36	44 10.7	54 31.60	-11.04	+0 0.64	+11.56	-2.59	-29.30	23 44 26.36	53 30 18.1
23 44 7.2	8.7	45 6.64	44 57.2	5 18.75	- 7.09	+0 0.65	+11.64	-2.60	-29.40	23 45 7.65	53 19 34.8
23 45 26.8	7.0	46 25.10	46 1.3	50 11.05	-17.84	+0 0.64	+11.75	-2.61	-29.40	23 46 26.09	53 34 31.9
23 47 11.3	8.6	48 9.76	47 46.2	34 7.70	-17.58	+0 0.65	+11.86	-2.64	-29.40	23 48 10.75	53 50 35.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ^{''}	^{''}	^m ^s	^{''}	^s	^{''}	^h ^m ^s	[°] ['] ^{''}
23 48 2.1	8.8	49 0.54	48 42.6	22 53.00	-14.21	+0 0.68	+ 8.91	-2.65	-29.00	23 49 1.56	51 1 51.2
23 49 14.1	8.5	50 13.32	49 52.5	2 22.60	-15.67	+0 0.65	+11.47	-2.66	-29.30	23 50 14.31	53 22 22.4
23 50 49.2	9.2	51 48.92	51 20.6	4 21.85	-22.80	+0 0.69	+ 8.00	-2.67	-29.00	23 51 49.95	50 20 12.8
23 51 41.5	8.2	52 41.08	52 18.1	23 45.85	-17.06	+0 0.65	+12.06	-2.69	-29.30	23 52 42.05	54 0 58.3
23 53 6.1	8.6	54 5.60	53 37.7	48 16.20	-20.90	+0 0.65	+11.59	-2.71	-29.20	23 54 6.56	53 36 23.8
23 55 0.9	9.3	56 1.14	55 40.5	58 20.95	-15.49	+0 0.65	+11.50	-2.73	-29.20	23 56 2.10	53 26 24.3
ZONE 352, NOVEMBER 10, 1874.											
22 1 54.9	8.2	2 34.36	2 16.5	19 12.20	-14.19	+0 4.56	+ 8.94	-1.31	-26.60	22 2 39.87	51 5 32.6
22 2 30.3	8.7	3 10.34	2 58.3	24 25.20	- 9.54	+0 4.56	+ 8.89	-1.33	-26.60	22 3 15.84	51 0 24.3
22 3 31.9	8.5	4 12.52	3 51.8	14 54.55	-16.74	+0 4.57	+ 7.88	-1.36	-26.50	22 4 18.03	50 9 46.8
22 4 30.4	9.2	5 10.88	4 52.2	6 18.75	-15.08	+0 4.57	+ 8.23	-1.37	-26.50	22 5 16.38	50 18 24.7
22 5 29.7	9.0	6 11.08	5 47.1	37 1.05	-18.74	+0 4.55	+ 9.75	-1.33	-26.80	22 6 16.56	51 47 40.0
22 6 28.9	8.8	7 8.94	6 52.0	47 48.00	-13.25	+0 4.56	+ 9.60	-1.35	-26.80	22 7 14.42	51 36 58.4
22 7 34.7	8.3	8 13.56	7 40.1	2 36.95	-25.24	+0 4.54	+11.30	-1.30	-27.10	22 8 19.03	53 21 58.9
22 8 48.9	8.2	9 30.34	9 4.8	5 29.60	-19.69	+0 4.55	+10.38	-1.35	-27.00	22 9 35.81	52 19 11.1
22 9 45.5	9.2	10 26.80	10 7.9	58 27.45	-15.20	+0 4.57	+ 8.27	-1.43	-26.80	22 10 32.27	50 26 15.8
22 10 47.7	8.6	11 26.00	11 11.5	5 36.55	-10.94	+0 4.55	+11.58	-1.35	-27.20	22 11 31.45	53 19 13.9
22 11 59.3	9.2	12 40.16	12 4.2	44 45.25	-28.02	+0 4.56	+ 9.29	-1.42	-27.10	22 12 45.61	51 39 46.0
22 13 3.1	7.0	13 42.80	13 16.1	22 49.35	-20.74	+0 4.55	+ 9.93	-1.42	-27.20	22 13 48.30	52 1 49.8
22 13 31.3	8.2	14 11.86	14 37.6	9 3.45	+20.30	+0 4.56	+ 9.05	-1.45	-27.10	22 14 17.30	51 16 16.0
22 14 58.0	9.1	15 41.78	15 22.4	27 56.10	-15.43	+0 4.56	+ 8.85	-1.48	-27.10	22 15 47.21	50 56 47.4
22 15 51.9	8.7	16 33.72	16 15.7	8 21.25	-13.59	+0 4.55	+11.36	-1.41	-27.60	22 16 39.15	53 16 26.2
22 17 49.0	8.0	18 30.82	18 11.7	25 33.75	-15.20	+0 4.57	+ 9.01	-1.51	-27.20	22 18 36.24	50 59 10.2
22 19 0.2	8.0	19 41.62	19 22.5	18 12.65	-14.81	+0 4.56	+10.08	-1.49	-27.50	22 19 47.03	52 6 32.5
22 19 45.1	8.9	20 27.10	20 12.9	13 37.05	-10.99	+0 4.56	+10.20	-1.50	-27.50	22 20 32.51	52 11 12.1
22 20 23.8	9.0	21 5.72	20 56.6	52 37.20	- 7.30	+0 4.58	+ 8.49	-1.56	-27.30	22 21 11.13	50 32 14.1
22 22 6.2	8.2	22 48.04	22 18.7	4 44.30	-22.61	+0 4.56	+10.13	-1.53	-27.60	22 22 53.43	52 19 53.1
22 23 22.9	8.0	24 4.78	23 44.8	16 56.40	-15.50	+0 4.56	+10.16	-1.55	-27.70	22 24 10.16	52 7 48.1
22 24 7.0	6.5	24 48.16	24 34.8	38 15.20	-10.47	+0 4.56	+ 9.78	-1.57	-27.70	22 24 53.54	51 46 34.0
22 25 21.3	7.9	26 4.06	25 34.7	10 43.90	-23.75	+0 4.58	+ 8.05	-1.62	-27.50	22 26 9.45	50 13 50.5
22 26 29.0	9.0	27 11.60	26 50.9	7 39.45	-16.35	+0 4.57	+ 9.20	-1.61	-27.70	22 27 16.98	51 17 3.3
22 27 34.1	9.1	28 17.68	27 54.4	47 52.50	-17.86	+0 4.56	+10.62	-1.58	-27.90	22 28 23.05	52 36 50.0
22 29 8.0	8.8	29 51.00	29 25.6	4 0.75	-19.49	+0 4.56	+10.24	-1.61	-27.90	22 29 56.36	52 20 39.8
22 29 48.9	8.8	30 31.44	30 19.3	19 1.45	- 9.39	+0 4.56	+10.10	-1.63	-27.90	22 30 36.79	52 5 49.1
22 30 58.0	8.5	31 42.12	31 24.4	56 56.20	-14.23	+0 4.58	+ 8.38	-1.68	-27.70	22 31 47.48	50 27 48.0
22 32 25.7	9.0	33 8.96	32 32.8	40 55.10	-28.31	+0 4.56	+ 9.53	-1.67	-27.90	22 33 14.30	51 43 36.1
22 33 44.7	8.7	34 28.06	34 8.6	58 32.95	-15.25	+0 4.57	+ 9.34	-1.71	-27.90	22 34 33.38	51 26 11.1
22 34 41.1	8.8	35 25.50	35 5.7	0 12.20	-15.93	+0 4.58	+ 8.39	-1.73	-27.80	22 35 30.84	50 24 30.4
22 36 8.8	9.4	36 53.24	36 32.6	30 5.10	-15.69	+0 4.56	+11.10	-1.69	-28.20	22 36 58.55	52 54 40.1
22 39 34.9	7.6	40 18.38	40 5.9	10 48.05	- 9.67	+0 4.56	+10.40	-1.75	-28.30	22 40 23.68	52 14 2.4
22 40 30.3	8.9	41 14.32	40 59.3	50 0.40	-11.51	+0 4.56	+10.80	-1.75	-28.30	22 41 19.61	52 34 48.7
22 41 35.9	9.0	42 20.72	41 45.1	14 53.80	-27.57	+0 4.56	+ 9.83	-1.77	-28.30	22 42 26.01	52 9 38.3
22 42 42.4	9.0	43 27.32	42 59.4	11 56.85	-22.07	+0 4.57	+ 9.07	-1.81	-28.20	22 43 32.61	51 12 40.1
22 43 32.3	9.2	44 17.72	44 5.2	29 0.75	- 9.73	+0 4.56	+ 9.92	-1.81	-28.30	22 44 22.99	51 55 49.3
22 44 48.7	8.6	45 33.80	45 7.2	1 45.85	-20.50	+0 4.56	+10.37	-1.81	-28.40	22 45 39.07	52 22 53.8
22 45 37.3	7.8	46 22.36	46 46.3	3 20.90	+18.44	+0 4.56	+10.31	-1.82	-28.40	22 46 27.62	52 21 57.7
22 47 23.8	8.6	48 9.46	47 38.5	22 33.50	-24.08	+0 4.57	+ 9.88	-1.85	-28.40	22 48 14.72	52 2 2.2
22 49 14.2	8.0	50 0.46	49 33.6	27 14.25	-20.93	+0 4.57	+ 9.88	-1.90	-28.40	22 50 5.69	51 57 24.6
22 50 28.1	9.1	51 15.32	50 46.7	38 32.85	-22.35	+0 4.57	+ 9.58	-1.90	-28.40	22 51 20.56	51 46 4.4
22 52 55.0	7.0	53 41.90	53 9.7	46 32.05	-25.24	+0 4.58	+ 9.48	-1.93	-28.60	22 53 47.14	51 38 2.0
22 53 43.3	8.7	54 29.16	54 15.9	41 36.90	-10.40	+0 4.57	+ 9.79	-1.94	-28.60	22 54 34.39	51 43 12.3
22 55 23.8	9.8	56 14.62	56 3.0	38 58.90	- 8.86	+0 4.57	+10.82	-1.94	-28.70	22 56 19.84	52 45 52.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
22 56 27.4	8.5	57 13.76	56 59.9	50 22.55	-10.67	+0 4.57	+10.79	-1.96	-28.80	22 57 18.97	52 34 27.3
22 58 16.0	8.9	59 2.46	58 39.3	3 46.10	-17.49	+0 4.56	+11.36	-1.97	-28.90	22 59 7.65	53 20 57.4
22 59 29.0	9.0	0 15.40	59 56.9	4 18.35	-13.95	+0 4.56	+11.39	-1.99	-28.50	23 0 20.58	53 20 29.2
23 0 39.5	9.2	1 25.88	1 0.0	20 25.40	-19.19	+0 4.55	+12.25	-1.99	-29.00	23 1 31.05	54 4 17.3
23 1 36.3	9.0	2 22.98	2 1.9	45 43.00	-15.79	+0 4.55	+11.86	-2.01	-29.00	23 2 28.14	53 39 2.7
23 2 39.7	9.0	3 27.58	3 1.9	7 39.60	-20.74	+0 4.59	+ 8.07	-2.07	-29.60	23 3 32.78	50 16 56.8
23 3 30.1	9.0	4 22.96	4 3.0	7 2.95	-15.79	+0 4.58	+ 9.25	-2.07	-29.80	23 4 28.14	51 17 39.4
23 4 25.4	8.8	5 14.42	4 54.5	9 39.90	-15.73	+0 4.58	+ 9.08	-2.08	-29.80	23 5 19.60	51 15 2.3
23 5 38.2	9.0	6 25.34	6 0.3	25 10.85	-18.56	+0 4.55	+12.20	-2.05	-29.10	23 6 30.49	53 59 32.4
23 7 37.3	7.8	8 25.70	8 11.2	18 21.15	-10.99	+0 4.55	+11.22	-2.10	-29.00	23 8 30.83	53 6 28.8
23 8 44.1	8.0	9 32.14	9 6.2	44 2.00	-19.37	+0 4.55	+11.64	-2.01	-29.10	23 9 37.36	53 40 40.0
23 9 41.7	8.6	10 30.18	10 3.9	41 18.05	-19.65	+0 4.55	+11.84	-2.12	-29.20	23 10 35.29	53 43 23.7
23 10 37.2	9.1	11 26.76	10 58.5	31 34.20	-21.06	+0 4.55	+11.97	-2.13	-29.20	23 11 31.87	53 53 6.3
23 11 35.1	8.9	12 23.66	12 5.5	58 56.00	-13.69	+0 4.55	+11.50	-2.15	-29.20	23 12 28.76	53 25 51.4
23 12 21.4	7.3	13 9.84	12 56.5	33 31.70	- 9.91	+0 4.55	+11.98	-2.15	-29.20	23 13 14.94	53 51 20.0
23 13 54.3	9.0	14 42.82	14 17.1	31 5.05	-19.11	+0 4.55	+12.10	-2.17	-29.20	23 14 47.91	53 53 37.6
23 15 30.4	9.1	16 20.36	15 57.9	45 48.00	-16.84	+0 4.55	+11.84	-2.18	-29.20	23 16 25.46	53 38 56.7
23 16 58.9	7.0	17 47.70	17 10.0	3 49.45	-28.42	+0 4.56	+11.12	-2.22	-29.20	23 17 52.78	53 20 43.0
23 17 28.8	9.0	18 19.42	18 19.8	24 37.65	+ 0.30	+0 4.56	+12.14	-2.23	-29.30	23 18 24.49	54 0 24.4
23 18 26.7	8.8	19 16.88	19 5.9	39 34.95	- 8.79	+0 4.59	+ 8.61	-2.26	-28.90	23 19 21.99	50 45 14.9
23 20 5.4	8.7	20 55.70	20 31.6	32 22.10	-17.95	+0 4.56	+11.96	-2.26	-29.20	23 21 0.76	53 52 21.7
ZONE 353, NOVEMBER 11, 1874.											
22 58 13.4	8.5	58 59.58	58 28.3	7 29.35	-24.18	+0 4.81	+10.31	-1.96	-28.90	22 59 5.05	52 17 6.4
23 0 45.5	5.5	1 32.68	1 4.7	16 11.50	-21.70	+0 4.81	+10.25	-2.00	-28.90	23 1 38.13	52 8 26.7
23 1 48.6	8.6	2 35.98	2 6.4	53 22.75	-23.76	+0 4.82	+ 8.32	-2.05	-28.80	23 2 41.42	50 31 11.6
23 3 0.7	9.0	3 49.14	3 24.7	58 28.90	-19.62	+0 4.82	+ 8.33	-2.06	-28.80	23 3 54.58	50 26 9.7
23 4 31.3	8.9	5 17.44	4 59.2	37 28.50	-13.90	+0 4.80	+11.03	-2.04	-29.10	23 5 22.86	52 47 18.2
23 5 32.9	8.5	6 20.70	5 55.8	44 55.75	-19.07	+0 4.80	+10.68	-2.10	-28.80	23 6 26.07	52 39 45.8
23 8 0.5	9.0	8 50.92	8 18.9	48 20.70	-24.54	+0 4.80	+10.60	-2.08	-29.10	23 8 56.32	52 36 15.0
23 8 38.3	9.0	9 26.60	.....	.....	.....	+0 4.80	.....	-2.08	.....	23 9 32.00	.....
23 9 41.7	8.5	10 29.84	10 31.2	41 39.00	+ 1.05	+0 4.77	+12.16	-2.11	-29.40	23 10 35.18	53 43 23.6
23 10 37.2	9.0	11 26.50	11 14.9	31 47.65	- 8.63	+0 4.77	+12.28	-2.10	-29.40	23 11 31.86	53 53 5.4
23 11 35.1	9.0	12 23.42	12 14.6	59 4.00	- 6.62	+0 4.78	+11.75	-2.12	-29.30	23 12 28.78	53 25 50.6
23 12 21.4	7.0	13 9.48	12 50.0	33 27.15	-14.53	+0 4.77	+12.09	-2.12	-29.40	23 13 14.83	53 51 19.8
23 13 54.3	9.0	14 42.64	14 12.4	31 2.80	-22.47	+0 4.77	+12.13	-2.15	-29.40	23 14 47.97	53 53 36.3
23 15 30.4	8.9	16 20.14	15 59.5	45 49.60	-15.36	+0 4.78	+12.18	-2.17	-29.50	23 16 25.48	53 38 56.6
23 16 58.9	6.9	17 47.44	17 13.8	3 53.05	-25.33	+0 4.78	+11.35	-2.20	-29.40	23 17 52.76	53 20 42.5
23 18 51.0	7.3	19 38.92	19 25.9	40 34.40	- 9.48	+0 4.76	+13.31	-2.21	-29.60	23 19 44.21	54 44 18.8
23 20 5.4	8.6	20 55.58	20 27.5	32 19.55	-20.92	+0 4.77	+12.09	-2.23	-29.50	23 21 0.88	53 52 21.1
23 20 32.6	9.0	21 23.48	21 32.3	12 44.85	+ 6.66	+0 4.82	+11.53	-2.24	-29.50	23 21 28.83	53 12 22.8
23 21 51.7	8.8	22 43.18	22 18.3	6 41.80	-20.09	+0 4.83	+ 8.27	-2.29	-29.10	23 22 48.53	50 17 56.3
23 22 47.0	8.7	23 37.26	23 20.2	30 7.25	-13.32	+0 4.81	+10.20	-2.28	-29.30	23 23 42.59	51 54 39.3
23 24 10.9	9.0	25 2.00	24 36.0	13 33.25	-19.68	+0 4.79	+11.33	-2.26	-29.50	23 25 7.33	53 11 7.9
23 25 6.8	8.4	25 56.54	25 31.6	4 55.10	-18.78	+0 4.79	+11.43	-2.30	-29.50	23 26 1.84	53 19 47.1
23 25 57.9	8.3	26 49.16	26 25.2	51 38.30	-18.01	+0 4.78	+11.84	-2.31	-29.50	23 26 54.44	53 33 5.1
23 27 17.4	8.3	28 8.04	27 35.8	1 56.15	-24.25	+0 4.79	+11.51	-2.33	-29.50	23 28 13.32	53 22 40.7
23 28 35.8	8.1	29 26.88	28 57.8	5 9.90	-21.94	+0 4.80	+11.61	-2.35	-29.50	23 29 32.16	53 19 29.3
23 29 33.4	9.5	30 25.18	30 13.5	25 36.45	- 9.69	+0 4.78	+12.46	-2.36	-29.60	23 30 30.44	53 59 15.8
23 30 44.6	8.7	31 36.12	31 10.8	45 56.45	-18.94	+0 4.79	+11.94	-2.38	-29.60	23 31 41.38	53 38 46.0
23 31 56.1	7.9	32 47.06	32 27.6	39 47.15	-14.56	+0 4.78	+11.95	-2.39	-29.60	23 32 52.31	53 44 59.7
23 32 32.0	9.0	33 23.92	33 37.9	46 22.65	+11.21	+0 4.83	+ 8.75	-2.42	-29.40	23 33 29.21	50 38 47.0
23 33 48.1	8.7	34 39.94	34 16.6	22 20.80	-18.10	+0 4.81	+10.15	-2.43	-29.40	23 34 45.20	52 2 21.0

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
23 34 53.4	8.0	35 45.14	35 19.1	24 26.35	-19.29	+0 4.78	+12.14	-2.43	-29.70	23 35 50.37	54 0 15.9
23 35 37.8	7.2	36 29.50	36 18.7	40 46.95	-8.63	+0 4.83	+8.91	-2.47	-29.30	23 36 34.76	50 44 3.2
23 37 41.5	8.3	38 34.32	38 14.5	11 29.40	-16.00	+0 4.84	+8.23	-2.49	-29.20	23 38 39.59	50 13 12.8
23 38 51.0	9.2	39 43.32	39 17.8	22 13.30	-18.90	+0 4.78	+12.30	-2.48	-29.60	23 39 48.53	54 2 29.7
23 39 42.1	8.2	40 34.62	40 13.0	54 15.95	-16.22	+0 4.79	+11.68	-2.49	-29.60	23 40 39.84	53 30 29.1
23 41 15.4	7.8	42 8.56	41 39.6	24 24.95	-21.53	+0 4.78	+12.11	-2.52	-29.60	23 42 13.75	54 0 15.2
23 42 28.9	8.7	43 21.98	42 51.0	22 40.85	-22.99	+0 4.78	+12.20	-2.53	-29.70	23 43 27.17	54 1 57.8
23 43 27.0	7.0	44 21.10	43 52.0	54 22.40	-21.86	+0 4.79	+11.59	-2.55	-29.60	23 44 26.29	53 30 16.9
23 44 7.2	8.8	45 2.40	44 48.8	5 16.85	-10.26	+0 4.80	+11.78	-2.56	-29.60	23 45 7.60	53 19 34.3
23 45 26.8	7.0	46 20.96	45 54.7	50 11.45	-19.72	+0 4.79	+11.91	-2.58	-29.60	23 46 26.13	53 34 30.4
23 47 11.3	8.5	48 5.48	47 36.0	34 4.35	-21.98	+0 4.78	+12.03	-2.60	-29.60	23 48 10.64	53 50 35.3
23 48 2.1	9.0	48 56.44	48 30.3	22 48.45	-20.73	+0 4.83	+8.94	-2.61	-29.40	23 49 1.65	51 1 49.6
23 49 14.1	8.6	50 9.06	49 35.6	2 16.30	-25.23	+0 4.79	+11.50	-2.63	-29.60	23 50 14.22	53 22 19.6
23 50 49.2	9.0	51 44.86	51 8.8	4 17.55	-29.09	+0 4.84	+7.99	-2.64	-29.30	23 51 50.07	50 20 11.3
23 51 41.5	7.8	52 36.86	52 13.6	23 48.55	-17.29	+0 4.78	+12.24	-2.66	-29.70	23 52 41.99	54 0 55.9
23 53 6.1	8.8	54 1.46	53 32.5	48 17.10	-21.72	+0 4.79	+11.76	-2.68	-29.60	23 54 6.59	53 36 22.6
23 55 0.9	8.8	55 56.98	55 32.9	58 21.10	-18.12	+0 4.79	+11.63	-2.70	-29.60	23 56 2.11	53 26 22.0
ZONE 354, NOVEMBER 16, 1874.											
23 8 37.2	8.5	9 20.66	9 0.5	44 27.50	-15.82	+0 9.51	+9.98	-2.00	-29.60	23 9 30.87	51 40 15.8
23 9 56.9	9.0	10 39.98	10 19.8	36 29.20	-15.42	+0 9.50	+11.42	-1.99	-29.80	23 10 50.19	52 48 15.7
23 11 21.6	8.5	12 4.48	11 42.1	53 44.45	-17.21	+0 9.50	+10.99	-2.12	-29.80	23 12 14.57	52 30 58.3
23 13 22.0	9.2	14 4.50	13 41.8	23 56.90	-16.43	+0 9.47	+13.84	-2.00	-30.20	23 14 14.66	55 0 49.1
23 15 1.9	8.0	15 47.94	15 17.7	23 13.30	-21.86	+0 9.46	+13.80	-2.03	-30.20	23 15 58.08	55 1 27.2
23 16 18.7	8.9	17 3.76	16 34.3	17 49.05	-22.87	+0 9.49	+10.48	-2.09	-29.90	23 17 13.91	52 6 47.5
23 16 57.7	7.9	17 42.86	17 26.9	23 19.25	-12.43	+0 9.49	+10.51	-2.10	-29.90	23 17 53.01	52 1 27.8
23 18 11.6	9.2	18 57.28	18 36.6	35 46.90	-15.43	+0 9.47	+12.64	-2.09	-30.10	23 19 7.41	53 48 59.1
23 18 54.0	7.1	19 37.34	19 27.6	7 15.85	-7.49	+0 9.49	+10.91	-2.11	-30.00	23 19 47.49	52 17 36.4
23 19 44.3	9.2	20 30.38	20 21.0	13 41.95	-7.28	+0 9.49	+10.71	-1.99	-30.50	23 20 40.66	52 11 9.9
23 20 42.6	9.5	21 28.54	21 4.3	2 6.80	-18.65	+0 9.49	+10.90	-2.14	-30.00	23 21 38.67	52 22 34.3
23 22 2.1	8.7	22 48.68	22 22.8	0 45.85	-19.95	+0 9.49	+10.98	-2.16	-30.00	23 22 58.80	52 23 54.1
23 22 39.7	8.6	23 25.28	23 17.7	15 56.05	-5.89	+0 9.49	+10.84	-2.18	-30.00	23 23 35.39	52 8 57.8
23 23 25.4	9.8	24 12.06	24 23.2	9 52.05	+8.58	+0 9.49	+10.71	-2.18	-30.10	23 24 22.17	52 15 16.1
23 24 28.7	8.7	25 15.00	25 1.1	13 17.25	-10.76	+0 9.49	+10.72	-2.20	-30.10	23 25 25.10	52 11 31.6
23 25 34.1	8.0	26 20.24	25 58.8	48 14.45	-16.41	+0 9.49	+11.14	-2.21	-30.10	23 26 30.34	52 36 29.1
23 27 5.3	9.4	27 52.30	27 25.9	49 12.15	-21.16	+0 9.50	+8.72	-2.25	-29.90	23 28 2.40	50 35 24.5
23 27 49.7	8.9	28 36.18	28 27.8	13 45.40	-6.50	+0 9.49	+10.74	-2.24	-30.10	23 28 46.27	52 11 7.7
23 28 31.2	8.7	29 17.56	29 9.0	37 34.95	-6.87	+0 9.50	+9.19	-2.27	-30.00	23 29 27.64	50 47 16.4
23 29 31.9	8.8	30 18.38	29 57.6	30 11.20	-16.56	+0 9.50	+9.37	-2.28	-30.00	23 30 28.46	50 54 30.6
23 30 48.5	9.2	31 36.64	31 12.3	10 15.25	-19.62	+0 9.51	+8.60	-2.30	-29.90	23 31 46.72	50 14 22.8
23 33 22.4	9.0	34 10.18	33 42.6	22 9.20	-21.91	+0 9.50	+9.33	-2.33	-30.00	23 34 20.24	51 2 27.3
23 35 43.9	9.1	36 32.00	36 9.9	20 49.80	-16.77	+0 9.49	+11.80	-2.34	-30.30	23 36 42.04	53 3 54.0
23 36 35.8	8.7	37 23.82	37 8.3	7 34.25	-11.97	+0 9.49	+10.87	-2.36	-30.20	23 37 33.85	52 17 13.5
23 38 9.2	9.0	38 58.06	38 32.9	14 37.89	-20.38	+0 9.51	+8.23	-2.40	-30.00	23 39 8.10	50 9 59.0
23 39 56.0	8.2	40 44.76	40 22.8	32 53.25	-17.53	+0 9.50	+9.17	-2.41	-30.10	23 40 54.79	50 51 47.4
23 40 43.5	8.8	41 32.24	41 15.0	12 35.50	-13.61	+0 9.49	+9.62	-2.42	-30.10	23 41 42.25	51 12 9.5
23 41 49.9	8.6	42 38.22	42 24.4	54 21.00	-10.60	+0 9.48	+11.03	-2.43	-30.30	23 42 48.21	52 30 28.2
23 43 3.4	8.4	43 51.98	43 26.3	12 1.25	-19.88	+0 9.48	+10.76	-2.45	-30.30	23 44 1.96	52 12 38.5
23 44 44.5	9.0	45 32.04	45 9.6	54 0.50	-17.21	+0 9.48	+10.98	-2.47	-30.30	23 45 42.01	52 30 42.1
23 45 36.5	9.2	46 25.88	46 15.5	15 49.80	-8.06	+0 9.48	+10.86	-2.48	-30.30	23 46 35.85	52 9 1.8
23 46 51.7	9.2	47 41.30	47 14.6	20 11.00	-20.72	+0 9.48	+10.64	-2.50	-30.30	23 47 51.26	52 4 27.8
23 48 4.3	9.1	48 54.74	48 22.9	13 38.85	-25.72	+0 9.50	+8.20	-2.52	-30.00	23 49 4.72	50 10 52.8
23 49 17.8	9.3	50 6.72	49 39.6	6 4.75	-21.84	+0 9.49	+8.65	-2.54	-30.10	23 50 16.67	50 18 31.1

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
23 51 3.6	9.0	51 54.04	51 34.9	43 9.90	-15.31	+0 9.49	+ 8.98	-2.56	-30.10	23 52 3.99	50 41 32.8
23 53 28.5	8.3	54 18.52	54 35.7	18 8.35	+13.93	+0 9.50	+ 8.29	-2.59	-30.00	23 54 28.46	50 7 3.0
23 54 22.5	8.5	55 13.38	55 34.4	20 41.20	+16.30	+0 9.48	+10.68	-2.60	-30.30	23 55 23.30	52 4 34.6
23 55 10.0	8.4	56 0.68	56 26.5	33 55.10	+19.22	+0 9.46	+12.44	-2.60	-30.50	23 56 10.58	53 51 25.2
23 56 24.8	8.7	57 16.30	57 8.5	54 58.40	- 6.00	+0 9.48	+11.01	-2.62	-30.30	23 57 26.21	52 29 55.5
23 57 28.4	8.1	58 18.30	57 57.5	51 30.10	-16.33	+0 9.49	+10.04	-2.64	-30.30	23 58 28.21	51 33 12.5
23 58 44.6	8.4	59 35.58	59 4.4	44 12.55	-24.96	+0 9.49	+ 8.73	-2.65	-30.20	23 59 45.49	50 40 20.2
23 59 30.9	9.1	0 22.22	0 4.6	6 34.45	-13.90	+0 9.49	+ 9.79	-2.67	-30.20	0 0 32.12	51 18 10.4
0 1 2.4	7.8	1 55.06	1 32.4	51 11.05	-17.42	+0 9.48	+11.20	-2.69	-30.40	0 2 4.94	52 33 31.5
0 2 17.1	8.5	3 9.92	2 41.0	34 42.70	-22.05	+0 9.48	+11.24	-2.71	-30.40	0 3 19.79	52 49 55.3
0 3 39.5	7.9	4 30.92	4 7.9	41 29.10	-17.59	+0 9.47	+11.37	-2.72	-30.40	0 4 40.78	52 43 13.4
0 4 32.9	7.0	5 25.00	5 4.4	29 0.00	-15.68	+0 9.47	+11.49	-2.74	-30.40	0 5 34.84	52 55 44.6
0 5 39.2	7.8	6 31.80	6 4.3	16 22.35	-21.78	+0 9.48	+ 9.51	-2.76	-30.20	0 6 41.64	51 8 14.4
0 7 8.9	9.0	8 1.70	7 34.5	30 30.10	-21.66	+0 9.48	+ 9.29	-2.76	-30.20	0 8 11.55	50 54 6.5
0 7 53.2	8.7	8 45.42	8 30.3	4 18.75	-11.91	+0 9.48	+ 9.70	-2.77	-30.20	0 8 55.27	51 20 28.0
0 9 21.3	7.8	10 13.20	9 48.8	51 45.65	-18.74	+0 9.47	+11.16	-2.80	-30.30	0 10 23.02	52 32 55.6
0 11 17.7	7.5	12 11.00	11 36.7	24 27.60	-27.84	+0 9.49	+ 7.92	-2.81	-30.00	0 12 20.84	50 0 1.6
0 12 29.1	8.7	13 22.28	12 55.6	48 27.70	-20.47	+0 9.47	+11.07	-2.84	-30.30	0 13 32.08	52 36 11.7
0 13 38.0	9.0	14 30.56	14 7.4	57 4.75	-17.85	+0 9.47	+11.04	-2.86	-30.30	0 14 40.35	52 27 37.3
0 14 33.9	8.0	15 27.44	15 1.7	30 12.15	-19.57	+0 9.47	+11.63	-2.87	-30.40	0 15 37.23	52 54 28.6
0 16 13.0	9.0	17 5.90	16 35.4	56 27.70	-23.46	+0 9.47	+10.98	-2.89	-30.30	0 17 15.68	52 28 8.6
0 17 18.0	6.0	18 11.48	17 47.9	3 26.45	-18.20	+0 9.47	+10.83	-2.91	-30.30	0 18 21.25	52 21 15.0
ZONE 355, NOVEMBER 18, 1874.											
23 8 37.2	8.4	9 20.72	9 0.9	44 30.15	-15.51	+0 9.57	+ 9.71	-1.95	-29.90	23 9 31.04	51 40 13.2
23 9 56.9	8.9	10 39.80	10 12.6	36 25.90	-20.77	+0 9.56	+11.06	-1.95	-30.10	23 10 50.11	52 48 13.3
23 11 21.6	8.8	12 4.34	11 35.1	53 40.10	-22.44	+0 9.56	+10.61	-1.97	-30.10	23 12 14.64	52 30 57.0
23 13 22.0	9.0	14 4.36	13 36.9	23 55.00	-19.91	+0 9.53	+13.44	-1.95	-30.50	23 14 14.63	55 0 47.1
23 15 1.9	7.9	15 47.88	15 19.3	23 15.20	-20.70	+0 9.53	+13.49	-1.97	-30.60	23 15 58.15	55 1 26.1
23 16 18.7	9.2	17 3.68	16 44.9	17 58.70	-14.58	+0 9.56	+10.33	-2.04	-30.10	23 17 13.95	52 6 46.1
23 16 57.7	8.0	17 43.04	17 35.3	23 26.05	- 5.98	+0 9.56	+10.30	-2.05	-30.10	23 17 53.31	52 1 27.3
23 18 11.6	9.2	18 57.28	19 16.5	36 17.10	+14.31	+0 9.54	+12.31	-2.05	-30.40	23 19 7.52	53 48 58.3
23 19 44.3	9.4	20 30.30	20 25.1	13 44.95	- 4.03	+0 9.56	+10.47	-2.13	-30.00	23 20 40.51	52 11 10.7
23 20 42.6	9.5	21 28.50	21 12.7	2 14.00	-12.18	+0 9.56	+10.71	-2.10	-30.30	23 21 38.74	52 22 33.4
23 22 2.1	8.9	22 48.62	22 16.0	0 41.00	-25.12	+0 9.56	+10.61	-2.11	-30.30	23 22 58.86	52 23 53.4
23 22 39.7	8.6	23 25.28	23 12.9	15 53.15	- 9.61	+0 9.56	+10.56	-2.12	-30.20	23 23 35.52	52 8 56.8
23 23 25.4	9.7	24 11.96	24 1.7	9 36.85	- 7.96	+0 9.56	+10.46	-2.14	-30.30	23 24 22.18	52 15 14.6
23 24 28.7	9.0	25 14.88	24 54.4	13 12.20	-15.87	+0 9.56	+10.40	-2.15	-30.30	23 25 25.10	52 11 31.3
23 25 34.1	8.2	26 20.00	25 58.1	48 14.80	-16.79	+0 9.56	+10.84	-2.17	-30.40	23 26 30.21	52 36 28.1
23 27 5.3	9.4	27 52.12	27 30.2	49 16.70	-17.55	+0 9.57	+ 8.53	-2.20	-30.10	23 28 2.34	50 35 23.5
23 27 49.7	9.0	28 36.12	28 30.1	13 46.20	- 4.65	+0 9.56	+10.46	-2.20	-30.40	23 28 46.32	52 11 8.5
23 28 52.5	9.0	29 39.56	29 19.3	37 35.30	-16.21	+0 9.57	+ 8.89	-2.23	-30.10	23 29 49.76	50 47 6.6
23 29 31.9	8.9	30 18.32	30 12.7	30 22.35	- 4.46	+0 9.57	+ 9.24	-2.24	-30.20	23 30 28.51	50 54 31.6
23 30 48.5	9.2	31 36.64	31 5.3	10 9.60	-25.27	+0 9.58	+ 8.27	-2.26	-30.10	23 31 46.83	50 14 22.6
23 33 22.4	9.1	34 10.32	33 44.6	22 11.70	-20.40	+0 9.57	+ 9.12	-2.29	-30.30	23 34 20.49	51 2 26.1
23 34 20.7	8.3	35 8.54	34 50.9	40 15.30	-13.76	+0 9.56	+10.10	-2.29	-30.40	23 35 18.70	51 44 30.0
23 35 43.9	9.3	36 31.94	36 4.4	20 45.75	-20.87	+0 9.56	+11.55	-2.30	-30.60	23 36 42.09	53 3 53.7
23 36 35.8	8.8	37 23.80	37 2.4	7 30.15	-16.53	+0 9.56	+10.54	-2.32	-30.50	23 37 33.94	52 17 12.8
23 38 9.2	8.6	38 58.14	38 35.2	14 39.25	-18.52	+0 9.58	+ 8.05	-2.36	-30.20	23 39 8.29	50 9 59.5
23 39 56.0	8.5	40 44.90	40 20.6	32 52.55	-19.37	+0 9.57	+ 8.91	-2.37	-30.30	23 40 55.04	50 51 46.1
23 40 43.5	8.9	41 32.14	41 8.5	12 31.25	-18.67	+0 9.57	+ 9.31	-2.38	-30.40	23 41 42.27	51 12 8.4
23 41 49.9	8.4	42 38.14	42 10.2	54 10.20	-21.44	+0 9.56	+10.61	-2.39	-30.60	23 42 48.25	52 30 27.8
23 43 3.4	8.7	43 51.82	43 25.9	12 2.70	-20.04	+0 9.56	+10.44	-2.41	-30.60	23 44 1.92	52 12 36.5

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
23 44 44.5	9.0	45 31.94	45 7.9	53 58.95	-18.44	+0 9.56	+10.69	-2.43	-30.60	23 45 42.03	52 30 42.1
23 45 36.5	9.4	46 25.88	46 0.0	15 37.15	-20.07	+0 9.56	+10.47	-2.44	-30.60	23 46 35.97	52 9 2.1
23 46 51.7	9.1	47 41.30	47 8.8	20 5.95	-25.22	+0 9.56	+10.35	-2.46	-30.60	23 47 51.38	52 4 28.0
23 48 4.3	9.0	48 54.62	48 26.6	13 42.15	-22.64	+0 9.58	+ 8.07	-2.48	-30.30	23 49 4.72	50 10 52.4
23 49 17.8	9.4	50 6.52	49 35.3	6 0.95	-25.16	+0 9.57	+ 8.31	-2.50	-30.30	23 50 16.59	50 18 31.4
23 51 3.6	9.3	51 54.10	51 18.6	42 57.80	-28.39	+0 9.57	+ 8.53	-2.52	-30.40	23 52 4.17	50 41 31.4
23 53 28.5	7.0	54 18.28	53 49.5	16 29.10	-23.31	+0 9.58	+ 8.19	-2.55	-30.30	23 54 28.34	50 8 5.0
23 54 22.5	8.6	55 13.26	54 52.4	20 7.10	-16.22	+0 9.56	+10.46	-2.56	-30.60	23 55 23.30	52 4 36.0
23 55 10.0	8.3	56 0.66	55 55.4	33 33.30	- 3.95	+0 9.54	+12.33	-2.56	-30.80	23 56 10.68	53 51 23.8
23 56 24.8	8.8	57 16.16	56 55.0	54 47.70	-16.30	+0 9.56	+10.67	-2.59	-30.60	23 57 26.18	52 29 55.6
23 57 28.4	8.4	58 18.32	58 6.7	51 38.30	- 9.11	+0 9.57	+ 9.86	-2.60	-30.50	23 58 28.35	51 33 11.4
23 58 44.6	8.6	59 35.48	59 7.7	44 14.75	-22.24	+0 9.57	+ 8.57	-2.62	-30.40	23 59 45.50	50 40 20.7
23 59 30.9	9.1	0 22.02	0 6.6	6 36.70	-12.16	+0 9.57	+ 9.57	-2.63	-30.50	0 0 32.04	51 18 9.7
0 1 2.4	7.8	1 55.00	1 21.8	51 4.75	-25.48	+0 9.56	+10.85	-2.65	-30.70	0 2 5.00	52 33 29.4
0 2 17.1	8.4	3 9.76	2 41.8	34 42.80	-21.36	+0 9.56	+10.96	-2.67	-30.70	0 3 19.75	52 49 55.6
0 3 39.5	8.0	4 30.80	4 1.9	41 24.15	-22.10	+0 9.56	+11.02	-2.69	-30.70	0 4 40.78	52 43 13.6
0 4 32.9	6.3	5 24.92	5 2.8	28 59.70	-16.82	+0 9.56	+11.19	-2.70	-30.70	0 5 34.89	52 55 43.4
0 5 39.2	8.0	6 31.68	6 2.4	16 20.95	-23.21	+0 9.56	+ 9.24	-2.72	-30.50	0 6 41.64	51 8 14.1
0 7 8.9	9.1	8 1.70	7 36.8	30 32.30	-19.83	+0 9.56	+ 9.09	-2.72	-30.40	0 8 11.67	50 54 6.0
0 7 53.2	9.0	8 45.44	8 32.7	4 20.00	-10.02	+0 9.56	+ 9.47	-2.74	-30.50	0 8 55.40	51 20 28.4
0 9 21.3	7.8	10 13.02	9 44.6	51 42.10	-21.81	+0 9.55	+10.82	-2.77	-30.60	0 10 22.95	52 32 55.8
0 11 17.7	7.8	12 10.88	11 43.0	24 33.75	-22.65	+0 9.57	+ 7.82	-2.78	-30.30	0 12 20.83	50 0 0.6
0 12 29.1	8.5	13 22.14	12 54.5	48 26.85	-21.16	+0 9.55	+10.78	-2.81	-30.60	0 13 32.05	52 36 11.6
0 13 38.0	9.2	14 30.32	14 4.2	57 2.85	-20.08	+0 9.55	+10.74	-2.82	-30.60	0 14 40.23	52 27 36.6
0 14 33.9	7.8	15 27.38	15 7.0	30 16.40	-15.53	+0 9.55	+11.40	-2.84	-30.60	0 15 37.28	52 54 28.3
0 16 13.0	9.1	17 5.96	16 34.5	56 26.70	-24.23	+0 9.55	+10.70	-2.86	-30.60	0 17 15.85	52 28 8.6
0 17 18.0	6.0	18 11.32	17 43.5	3 22.00	-21.44	+0 9.55	+10.51	-2.88	-30.60	0 18 21.20	52 21 15.9
ZONE 356, NOVEMBER 21, 1874.											
23 11 21.6	9.1	12 4.96	11 52.3	53 51.40	- 9.76	+0 8.81	+10.90	-1.90	-30.30	23 12 14.58	52 30 58.4
23 13 22.0	9.3	14 4.98	13 39.5	23 56.35	-18.46	+0 8.79	+13.67	-1.87	-30.80	23 14 14.59	55 0 47.0
23 15 1.9	7.8	15 48.54	15 21.0	23 15.95	-19.45	+0 8.79	+13.72	-1.89	-30.80	23 15 58.15	55 1 26.5
23 16 18.7	8.8	17 4.46	16 35.0	17 49.50	-22.98	+0 8.80	+10.36	-1.97	-30.40	23 17 14.04	52 6 46.5
23 16 57.7	8.2	17 43.64	17 26.9	23 19.75	-12.97	+0 8.80	+10.35	-1.98	-30.40	23 17 53.22	52 1 26.3
23 18 11.6	9.2	18 57.88	18 29.0	35 40.25	-21.54	+0 8.78	+12.43	-1.97	-30.70	23 19 7.44	53 48 59.0
23 18 54.0	6.4	19 37.94	19 30.2	7 16.75	- 5.95	+0 8.80	+10.79	-2.07	-30.20	23 19 47.44	52 17 37.0
23 19 44.3	9.4	20 30.98	20 14.4	13 36.95	-12.85	+0 8.80	+10.52	-2.02	-30.50	23 20 40.54	52 11 9.3
23 20 42.6	9.5	21 29.16	21 17.7	2 16.90	- 8.86	+0 8.80	+10.88	-2.03	-30.70	23 21 38.71	52 22 33.5
23 22 2.1	8.5	22 49.18	22 20.7	0 43.80	-21.88	+0 8.80	+10.83	-2.05	-30.60	23 22 58.72	52 23 53.6
23 22 39.7	8.4	23 25.92	23 13.7	15 52.25	- 9.45	+0 8.80	+10.70	-2.06	-30.60	23 23 35.46	52 8 57.5
23 23 25.4	9.6	24 12.40	24 40.0	10 6.45	+21.34	+0 8.80	+10.70	-2.07	-30.60	23 24 21.93	52 15 14.1
23 24 28.7	8.7	25 15.62	25 7.5	13 21.95	- 6.27	+0 8.80	+10.61	-2.08	-30.60	23 25 25.15	52 11 30.9
23 25 34.1	8.3	26 20.76	26 0.2	48 15.15	-15.79	+0 8.80	+10.98	-2.10	-30.70	23 26 30.28	52 36 28.5
23 27 5.3	9.2	27 52.84	27 15.2	49 3.90	-30.14	+0 8.80	+ 8.41	-2.14	-30.40	23 28 2.35	50 35 23.1
23 27 49.7	8.8	28 36.78	28 24.9	13 42.80	- 9.21	+0 8.80	+10.55	-2.13	-30.70	23 28 46.29	52 11 7.0
23 28 31.2	8.8	29 18.06	29 14.1	37 34.80	- 7.19	+0 8.80	+ 9.09	-2.16	-30.50	23 29 27.55	50 47 15.8
23 28 52.5	8.9	29 40.16	29 19.2	37 34.70	-16.77	+0 8.80	+ 8.98	-2.17	-30.40	23 29 49.65	50 47 6.3
23 29 31.9	8.8	30 19.08	30 3.7	30 13.75	-12.26	+0 8.80	+ 9.33	-2.18	-30.50	23 30 28.56	50 54 32.0
23 33 22.4	9.2	34 10.86	.....	.....	.....	+0 8.80	.....	-2.22	.....	23 34 20.33	.....
23 34 20.7	7.7	35 9.20	34 47.7	40 14.60	-16.81	+0 8.80	+10.21	-2.23	-30.70	23 35 18.66	51 44 27.4
23 38 9.2	8.5	38 58.76	38 28.9	14 34.00	-24.19	+0 8.81	+ 8.04	-2.30	-30.50	23 39 8.20	50 9 58.6
23 39 56.0	8.6	40 45.36	40 14.1	32 46.50	-24.95	+0 8.80	+ 8.92	-2.32	-30.70	23 40 54.78	50 51 46.1
23 40 43.5	8.7	41 32.86	41 11.9	12 31.60	-16.62	+0 8.80	+ 9.45	-2.32	-30.70	23 41 42.28	51 12 9.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
23 41 49.9	8.8	42 38.86	42 16.9	54 14.40	-16.91	+0 8.80	+10.79	-2.33	-30.90	23 42 48.27	52 30 27.9
23 43 3.4	8.5	43 52.64	43 21.1	11 56.80	-24.37	+0 8.79	+10.49	-2.34	-30.90	23 44 2.04	52 12 37.7
23 44 44.5	8.8	45 32.66	45 22.4	54 9.50	-7.92	+0 8.79	+10.91	-2.37	-30.90	23 45 42.04	52 30 41.9
23 45 36.5	9.3	46 26.42	46 12.0	15 46.30	-11.16	+0 8.79	+10.72	-2.38	-30.90	23 46 35.80	52 9 1.7
23 46 51.7	9.1	47 41.90	47 17.7	20 10.80	-18.78	+0 8.79	+10.55	-2.39	-30.90	23 47 51.28	52 4 29.4
23 48 4.3	8.8	48 55.30	48 27.4	13 41.25	-22.56	+0 8.80	+8.16	-2.42	-30.60	23 49 4.68	50 10 53.1
23 49 17.8	9.2	50 7.32	49 42.6	6 6.50	-19.92	+0 8.79	+8.51	-2.44	-30.70	23 50 16.67	50 18 30.7
23 51 3.6	9.4	51 54.62	51 20.7	42 57.05	-27.11	+0 8.79	+8.66	-2.46	-30.70	23 52 3.97	50 41 33.2
23 53 28.5	7.5	54 19.02	.....	.....	.....	+0 8.80	.....	-2.50	.....	23 54 28.35	.....
23 54 22.5	8.8	55 13.92	54 52.1	20 7.30	-16.92	+0 8.79	+10.58	-2.50	-31.00	23 55 23.25	52 4 34.7
23 55 10.0	8.3	56 1.28	56 0.3	33 36.50	-0.74	+0 8.77	+12.50	-2.50	-31.20	23 56 10.59	53 51 23.4
23 56 24.8	8.6	57 16.90	56 48.9	54 41.75	-21.53	+0 8.79	+10.68	-2.53	-31.00	23 57 26.21	52 29 55.8
23 57 28.4	8.0	58 18.96	58 12.5	51 42.10	-5.10	+0 8.79	+10.01	-2.54	-30.90	23 58 28.27	51 33 11.3
23 58 44.6	8.2	59 36.18	59 8.5	44 14.15	-22.16	+0 8.79	+8.65	-2.56	-30.80	23 59 45.48	50 40 20.9
23 59 30.9	9.0	0 22.68	0 9.8	6 38.10	-10.18	+0 8.79	+9.69	-2.58	-30.90	0 0 31.97	51 18 9.9
0 1 2.4	7.0	1 55.70	1 37.8	51 14.65	-13.74	+0 8.79	+11.10	-2.60	-31.10	0 2 4.98	52 33 31.0
0 2 17.1	8.3	3 10.58	2 41.7	34 41.90	-22.05	+0 8.79	+11.04	-2.61	-31.10	0 3 19.86	52 49 55.4
0 3 39.5	8.0	4 31.44	3 59.3	41 21.25	-24.54	+0 8.79	+11.10	-2.63	-31.10	0 4 40.71	52 43 13.6
0 4 32.9	7.0	5 25.58	5 0.2	28 55.90	-19.33	+0 8.79	+11.25	-2.65	-31.10	0 5 34.83	52 55 44.3
0 5 39.2	8.0	6 32.40	6 10.6	16 25.60	-17.27	+0 8.79	+9.44	-2.66	-30.90	0 6 41.65	51 8 15.0
0 7 8.9	9.0	8 2.36	7 32.2	30 26.80	-24.05	+0 8.79	+9.13	-2.67	-30.80	0 8 11.61	50 54 6.8
0 7 53.2	8.6	8 45.98	8 34.9	4 22.00	-8.75	+0 8.79	+9.58	-2.68	-30.90	0 8 55.23	51 20 27.3
0 9 21.3	7.5	10 13.78	.....	.....	.....	+0 8.79	.....	-2.71	.....	0 10 23.01	.....
0 11 17.7	7.3	12 11.70	11 40.3	24 29.60	-25.49	+0 8.80	+7.84	-2.73	-30.70	0 12 20.93	50 0 1.4
0 12 29.1	8.5	13 22.84	12 49.7	48 22.00	-25.38	+0 8.79	+10.80	-2.76	-31.10	0 13 32.04	52 36 11.6
0 13 38.0	9.1	14 31.24	14 3.1	57 1.25	-21.62	+0 8.79	+10.81	-2.77	-31.00	0 14 40.44	52 27 36.3
0 14 33.9	8.0	15 28.08	15 4.8	30 13.50	-17.74	+0 8.79	+11.51	-2.78	-31.10	0 15 37.28	52 54 28.5
0 16 13.0	8.8	17 6.70	16 41.5	56 31.85	-19.39	+0 8.78	+10.89	-2.81	-31.10	0 17 15.87	52 28 7.9
0 17 18.0	5.9	18 12.00	17 40.2	3 18.80	-24.52	+0 8.78	+10.54	-2.83	-31.10	0 18 21.16	52 21 15.4
ZONE 357, NOVEMBER 24, 1874.											
23 47 48.3	8.0	48 40.24	48 9.0	30 57.60	-23.21	+0 8.03	+12.29	-2.34	-31.60	23 48 48.91	53 53 42.3
23 49 15.7	8.0	50 7.34	49 50.1	8 57.00	-13.02	+0 8.04	+11.55	-2.37	-31.50	23 50 16.01	53 15 52.5
23 50 2.3	8.7	50 53.26	50 46.2	57 53.00	-5.21	+0 8.03	+12.81	-2.44	-31.60	23 51 1.85	54 27 5.5
23 51 32.8	8.5	52 26.44	51 57.8	44 28.15	-20.88	+0 8.03	+12.98	-2.39	-31.60	23 52 35.09	54 40 14.8
23 53 20.2	8.9	54 11.56	53 45.3	17 6.15	-19.93	+0 8.04	+11.41	-2.43	-31.50	23 54 20.20	53 7 36.3
23 54 47.8	8.6	55 40.80	55 19.3	6 32.95	-15.84	+0 8.03	+12.85	-2.44	-31.60	23 55 49.43	54 18 14.9
23 55 47.1	9.0	56 38.44	56 14.6	35 29.90	-17.74	+0 8.03	+12.34	-2.44	-31.60	23 56 47.08	53 49 15.6
23 56 55.1	8.0	57 47.22	57 19.7	49 57.80	-20.62	+0 8.04	+11.72	-2.48	-31.60	23 57 55.84	53 34 44.2
23 57 34.7	8.6	58 26.54	58 9.7	16 3.30	-12.72	+0 8.04	+11.62	-2.49	-31.60	23 58 35.15	53 8 46.5
23 59 18.3	8.2	0 11.44	59 42.8	36 30.75	-21.33	+0 8.03	+12.18	-2.51	-31.70	0 0 20.03	53 48 10.9
0 0 52.3	8.8	1 44.82	1 14.5	24 19.45	-24.09	+0 8.03	+12.19	-2.53	-31.70	0 1 53.40	54 0 19.4
0 2 1.4	9.0	2 54.14	2 26.9	45 20.20	-20.35	+0 8.03	+12.12	-2.55	-31.70	0 3 2.72	53 39 22.4
0 3 7.5	8.8	4 1.80	3 37.3	12 59.00	-18.10	+0 8.03	+12.60	-2.57	-31.80	0 4 10.37	54 11 46.2
0 4 6.9	7.8	5 0.56	4 30.6	46 15.50	-22.45	+0 8.03	+12.01	-2.58	-31.70	0 5 9.13	53 38 24.8
0 5 27.8	9.1	6 22.82	5 54.5	38 32.00	-21.12	+0 8.03	+12.02	-2.61	-31.70	0 6 31.36	53 46 9.7
0 6 57.5	7.9	7 51.74	7 16.7	16 37.90	-26.52	+0 8.04	+11.32	-2.63	-31.60	0 8 0.28	53 7 57.8
0 7 42.0	9.1	8 37.34	8 24.9	4 55.40	-9.13	+0 8.03	+12.73	-2.64	-31.80	0 8 45.87	54 19 58.9
0 8 45.8	7.0	9 40.04	9 16.6	9 41.30	-17.68	+0 8.04	+11.42	-2.65	-31.80	0 9 48.58	53 15 3.1
0 9 32.3	7.0	10 28.86	10 11.1	7 39.90	-13.12	+0 8.03	+12.80	-2.66	-31.70	0 10 37.39	54 17 10.5
0 10 25.8	9.0	11 21.04	10 58.9	40 38.15	-16.10	+0 8.03	+13.44	-2.68	-31.80	0 11 29.56	54 44 9.8
0 11 50.9	8.3	12 46.84	12 14.5	27 44.65	-23.42	+0 8.03	+13.40	-2.70	-31.80	0 12 55.35	54 56 56.0
0 12 29.9	8.7	13 27.16	13 21.8	54 32.00	-4.05	+0 8.03	+11.84	-2.71	-31.60	0 13 35.66	53 30 26.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
0 14 46.8	8.8	15 42.60	15 11.0	49 12.10	-23.41	+0 8.03	+11.70	-2.74	-31.60	0 15 51.09	53 35 27.0
0 15 53.1	8.5	16 48.68	16 18.6	40 14.15	-22.48	+0 8.04	+12.18	-2.76	-31.60	0 16 57.17	53 44 26.4
0 27 27.2	7.0	28 23.74	28 12.1	54 2.45	-8.71	+0 8.04	+11.87	-2.92	-31.60	0 28 32.16	53 30 51.4
0 28 40.5	9.5	29 38.68	29 20.6	28 14.10	-13.44	+0 8.04	+12.37	-2.94	-31.60	0 29 47.09	53 56 35.5
0 30 52.0	8.0	31 49.72	31 22.0	23 18.25	-20.54	+0 8.04	+12.32	-2.98	-31.60	0 31 58.11	54 1 24.2
0 32 9.0	9.1	33 9.66	32 38.1	21 15.00	-22.85	+0 8.04	+13.63	-3.01	-31.70	0 33 18.04	55 3 26.4
0 33 22.3	9.0	34 22.16	33 42.7	9 25.80	-29.13	+0 8.04	+12.32	-3.02	-31.60	0 34 30.53	54 15 8.0
0 34 55.7	8.8	35 56.00	35 27.7	48 2.45	-20.69	+0 8.04	+13.04	-3.04	-31.70	0 36 4.37	54 36 40.4
0 35 47.1	8.2	36 45.46	36 33.9	30 4.25	-8.63	+0 8.04	+12.60	-3.04	-31.60	0 36 53.83	53 54 50.4
0 37 2.1	4.0	38 2.16	37 33.8	52 28.85	-20.80	+0 8.04	+13.00	-3.07	-31.60	0 38 10.51	54 32 14.0
0 37 36.1	9.0	38 37.80	38 42.3	48 0.75	+3.29	+0 8.04	+13.25	-3.09	-31.70	0 38 46.14	54 37 6.3
0 37 58.4	7.0	38 58.32	39 19.2	48 0.75	+15.28	+0 8.04	+13.15	-3.09	-31.70	0 39 6.66	54 37 18.2
0 38 48.4	8.8	39 48.12	39 34.3	27 28.15	-10.01	+0 8.05	+13.65	-3.10	-31.70	0 39 56.47	54 57 26.0
0 39 40.0	9.4	40 39.68	40 26.8	12 15.50	-9.54	+0 8.05	+12.68	-3.11	-31.60	0 40 48.02	54 12 38.2
0 40 57.4	9.1	41 56.02	41 27.5	4 58.35	-21.49	+0 8.05	+11.44	-3.11	-31.30	0 42 4.36	53 19 42.4
0 41 6.4	9.2	42 6.38	.....	.....	.....	+0 8.05	.....	-3.11	.....	0 42 14.72	.....
0 42 15.4	8.5	43 16.50	42 49.4	35 56.10	-19.72	+0 8.05	+13.45	-3.15	-31.50	0 43 24.83	54 48 48.3
0 43 56.1	9.0	44 57.48	44 27.4	27 55.00	-21.83	+0 8.05	+13.44	-3.18	-31.50	0 45 5.79	54 56 47.2
0 45 4.9	8.9	46 5.72	45 21.5	37 10.10	-32.97	+0 8.05	+11.85	-3.18	-31.30	0 46 14.03	53 47 19.6
0 45 59.4	8.9	47 0.16	46 37.4	33 48.10	-16.75	+0 8.05	+12.18	-3.18	-31.30	0 47 8.47	53 50 58.1
0 47 10.2	8.4	48 10.34	47 31.5	42 54.65	-29.01	+0 8.05	+11.80	-3.21	-31.20	0 48 18.63	53 41 39.0
0 47 45.0	9.4	48 45.24	49 9.2	3 21.80	+18.08	+0 8.05	+11.65	-3.21	-31.20	0 48 53.53	53 21 58.8
0 49 7.9	8.1	50 8.98	49 40.1	41 29.00	-21.59	+0 8.05	+12.10	-3.23	-31.20	0 50 17.27	53 43 12.3
0 49 52.6	9.6	50 54.86	50 45.6	39 56.95	-6.96	+0 8.05	+12.00	-3.25	-31.20	0 51 3.14	53 44 58.9
0 51 18.3	8.8	52 19.72	51 46.2	21 15.10	-24.83	+0 8.05	+12.43	-3.28	-31.10	0 52 27.98	54 3 23.4
0 52 37.7	8.1	53 39.10	53 9.1	29 48.90	-22.01	+0 8.05	+12.06	-3.29	-31.10	0 53 47.36	53 54 52.0
0 53 48.7	9.2	54 51.12	54 15.7	33 16.90	-26.36	+0 8.05	+12.03	-3.31	-31.10	0 54 59.37	53 51 19.6
0 54 41.9	9.1	55 42.92	55 28.6	10 25.65	-10.80	+0 8.06	+11.81	-3.31	-31.00	0 55 51.17	53 14 26.2
ZONE 358, NOVEMBER 26, 1874.											
23 45 26.8	8.3	46 17.50	45 43.5	50 7.80	-25.49	+0 7.80	+12.42	-2.24	-31.70	23 46 26.02	53 34 31.0
23 47 48.3	8.0	48 40.36	48 8.5	30 59.40	-23.73	+0 7.80	+12.79	-2.29	-31.80	23 48 48.85	53 53 41.4
23 49 15.7	8.0	50 7.46	49 36.3	8 47.70	-23.57	+0 7.80	+11.87	-2.33	-31.80	23 50 15.93	53 15 52.4
23 50 2.3	8.5	50 53.54	50 44.2	57 51.75	-6.83	+0 7.79	+13.34	-2.40	-31.80	23 51 1.93	54 27 6.5
23 51 32.8	8.3	52 26.54	51 55.8	44 29.45	-22.41	+0 7.79	+13.49	-2.34	-32.00	23 52 35.00	54 40 13.2
23 53 20.2	9.0	54 11.66	53 39.2	17 5.00	-24.62	+0 7.79	+11.79	-2.38	-31.80	23 54 20.10	53 7 33.9
23 54 47.8	9.1	55 41.24	55 8.9	6 26.55	-23.80	+0 7.79	+13.24	-2.40	-31.90	23 55 49.67	54 18 14.6
23 55 47.1	9.2	56 38.72	56 15.2	35 32.55	-17.51	+0 7.79	+12.85	-2.40	-31.90	23 56 47.16	53 49 14.5
23 56 55.1	8.2	57 47.82	57 24.7	50 4.10	-17.32	+0 7.79	+12.60	-2.44	-31.90	23 57 56.23	53 34 42.8
23 57 34.7	9.2	58 26.94	58 19.9	16 14.95	-5.30	+0 7.79	+12.12	-2.45	-31.80	23 58 35.34	53 8 43.6
23 59 18.3	8.5	0 11.72	59 41.5	36 32.35	-22.52	+0 7.79	+12.68	-2.47	-31.90	0 0 20.11	53 48 9.5
0 0 52.3	9.2	1 45.16	1 15.7	24 21.90	-21.89	+0 7.79	+12.70	-2.49	-32.00	0 1 53.54	54 0 20.5
0 2 1.4	9.0	2 54.46	2 42.7	45 33.50	-8.83	+0 7.79	+12.75	-2.51	-31.90	0 3 2.84	53 39 22.1
0 3 7.5	9.0	4 1.94	3 41.3	13 4.80	-15.22	+0 7.79	+13.15	-2.53	-32.00	0 4 10.31	54 11 44.7
0 4 6.9	8.4	5 0.78	4 36.9	46 20.80	-17.89	+0 7.79	+12.58	-2.54	-31.90	0 5 9.15	53 38 25.6
0 5 27.8	9.1	6 23.00	5 57.8	38 38.60	-18.81	+0 7.79	+12.56	-2.56	-32.00	0 6 31.35	53 46 6.7
0 6 57.5	7.9	7 52.14	7 17.4	16 41.95	-26.29	+0 7.79	+11.80	-2.59	-31.90	0 8 0.47	53 7 55.2
0 7 42.0	9.1	8 37.72	8 20.2	4 53.40	-12.96	+0 7.79	+13.22	-2.59	-32.10	0 8 46.06	54 19 58.3
0 8 45.8	7.0	9 40.22	9 28.6	9 51.90	-8.76	+0 7.79	+11.99	-2.61	-31.90	0 9 48.55	53 15 3.0
0 9 32.3	7.1	10 29.10	10 15.1	7 45.95	-10.32	+0 7.79	+13.35	-2.62	-32.00	0 10 37.43	54 17 8.6
0 10 25.8	9.2	11 21.30	11 41.4	41 10.95	+14.64	+0 7.79	+13.96	-2.64	-32.10	0 11 29.62	54 44 9.1
0 11 50.9	8.0	12 47.02	12 16.8	27 48.55	-21.90	+0 7.79	+13.98	-2.66	-32.10	0 12 55.33	54 56 55.0
0 12 29.9	8.6	13 27.40	13 19.5	54 32.30	-5.93	+0 7.79	+12.32	-2.67	-31.90	0 13 35.70	53 30 25.7

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
0 14 46.8	8.5	15 42.82	15 8.7	49 11.45	-25.55	+0 7.79	+12.17	-2.70	-31.90	0 15 51.11	53 35 26.8
0 15 53.1	8.7	16 49.10	16 21.3	40 18.60	-20.76	+0 7.79	+12.71	-2.72	-31.90	0 16 57.38	53 44 25.0
0 28 40.5	9.1	29 39.00	29 45.9	28 36.10	+ 5.13	+0 7.79	+12.91	-2.91	-31.90	0 29 47.19	53 56 33.4
0 30 52.0	8.1	31 49.86	31 14.2	23 14.95	-26.48	+0 7.79	+12.70	-2.94	-31.90	0 31 58.04	54 1 22.8
0 32 9.0	9.3	33 9.72	32 35.6	21 15.30	-24.66	+0 7.79	+14.15	-2.97	-32.00	0 33 17.89	55 3 25.6
0 33 22.3	9.0	34 22.30	33 50.9	9 33.35	-23.16	+0 7.79	+12.99	-3.00	-31.90	0 34 30.44	54 15 7.9
0 34 55.7	8.9	35 56.20	35 31.3	47 5.65	-18.20	+0 7.79	+13.68	-3.00	-31.90	0 36 4.36	54 37 41.3
0 35 47.1	8.4	36 45.56	36 24.0	29 57.20	-16.06	+0 7.79	+12.68	-3.01	-31.80	0 36 53.71	53 54 50.9
0 37 2.1	5.0	38 2.30	37 26.2	52 23.35	-26.44	+0 7.79	+13.41	-3.04	-31.80	0 38 10.43	54 32 15.1
0 37 36.1	8.8	38 37.92	38 30.0	47 53.20	- 5.78	+0 7.79	+13.79	-3.05	-31.80	0 38 46.05	54 37 6.3
0 37 58.4	6.9	38 58.50	39 5.9	47 53.20	+ 5.41	+0 7.79	+13.79	-3.06	-31.80	0 39 6.62	54 37 17.5
0 38 48.4	9.1	39 48.24	39 35.8	27 29.85	- 8.99	+0 7.79	+14.21	-3.07	-31.80	0 39 56.36	54 57 26.8
0 39 40.0	9.1	40 39.92	40 32.6	12 20.45	- 5.40	+0 7.79	+13.23	-3.08	-31.70	0 40 48.03	54 12 38.9
0 40 57.4	9.1	41 56.15	41 38.5	5 8.00	-13.35	+0 7.79	+12.10	-3.08	-31.60	0 42 4.26	53 19 42.4
0 41 6.4	9.2	42 6.32	.....	.....	.....	+0 7.79	.....	-3.08	.....	0 42 14.43	.....
0 42 15.4	8.5	43 16.62	42 52.7	35 59.70	-17.39	+0 7.79	+14.03	-3.12	-31.80	0 43 24.72	54 48 48.4
0 43 56.1	9.0	44 57.76	44 21.9	27 52.70	-26.03	+0 7.79	+13.89	-3.15	-31.80	0 45 5.84	54 56 46.6
0 45 4.9	8.8	46 6.02	45 37.2	37 23.60	-21.48	+0 7.79	+12.63	-3.15	-31.60	0 46 14.10	53 47 19.1
0 45 59.4	8.6	47 0.38	46 44.7	33 54.30	-11.70	+0 7.79	+12.74	-3.15	-31.60	0 47 8.46	53 50 58.3
0 47 10.2	8.5	48 10.68	47 45.6	43 6.15	-18.76	+0 7.79	+12.52	-3.18	-31.50	0 48 18.74	53 41 39.2
0 47 45.0	9.0	48 45.74	49 9.4	3 22.40	+17.78	+0 7.78	+12.14	-3.18	-31.50	0 48 53.79	53 21 59.1
0 49 7.9	8.0	50 9.28	49 42.2	41 33.90	-20.24	+0 7.78	+12.63	-3.21	-31.50	0 50 17.32	53 43 10.1
0 51 18.3	8.7	52 19.80	51 53.9	21 22.40	-19.19	+0 7.78	+13.06	-3.25	-31.60	0 52 27.82	54 3 22.9
0 52 37.7	8.1	53 39.26	53 8.5	29 50.00	-22.91	+0 7.78	+12.58	-3.26	-31.50	0 53 47.28	53 54 51.2
0 53 48.7	9.3	54 51.34	54 18.2	33 21.45	-24.65	+0 7.78	+12.58	-3.28	-31.40	0 54 59.35	53 51 18.1
0 54 41.9	8.8	55 43.08	55 20.2	10 19.55	-17.30	+0 7.78	+12.21	-3.28	-31.40	0 55 51.08	53 14 26.9
ZONE 359, DECEMBER 2, 1874.											
23 53 2.5	9.0	53 53.26	53 36.3	10 10.45	-13.44	+0 8.23	+ 9.77	-2.27	-32.00	23 54 2.26	51 14 36.8
23 53 52.0	9.0	54 43.80	54 21.7	54 11.10	-16.98	+0 8.24	+10.81	-2.26	-32.20	23 54 52.81	52 30 33.4
23 55 6.9	9.0	55 58.12	55 31.2	16 35.25	-21.32	+0 8.23	+ 9.41	-2.30	-32.10	23 56 7.09	51 8 3.6
23 55 47.1	9.3	56 38.00	56 26.4	35 39.20	- 8.65	+0 8.23	+12.71	-2.28	-32.50	23 56 47.00	53 49 15.3
23 57 13.4	8.8	58 5.60	57 41.1	4 45.60	-19.75	+0 8.23	+ 8.28	-2.35	-31.90	23 58 14.54	50 19 53.9
23 58 35.9	8.6	59 27.78	59 3.1	49 49.95	-18.95	+0 8.24	+10.79	-2.34	-32.20	23 59 36.75	52 34 52.6
23 59 32.0	8.7	0 23.88	0 15.3	57 1.20	- 6.62	+0 8.24	+11.06	-2.35	-32.30	0 0 32.85	52 27 53.8
0 0 38.2	9.2	1 30.70	1 21.8	25 33.05	- 7.22	+0 8.23	+ 8.41	-2.39	-31.90	0 1 39.62	49 59 19.1
0 2 20.1	7.9	3 13.32	2 44.2	40 57.45	-23.26	+0 8.23	+ 8.95	-2.40	-32.00	0 3 22.25	50 43 39.1
0 3 25.7	8.8	4 19.44	3 49.4	30 59.35	-23.56	+0 8.23	+ 9.16	-2.41	-32.00	0 4 28.36	50 53 37.2
0 4 20.2	8.6	5 13.50	4 50.7	21 16.80	-18.48	+0 8.23	+ 8.29	-2.43	-32.00	0 5 22.41	50 3 23.9
0 5 27.8	9.3	6 22.40	5 52.7	38 30.15	-23.69	+0 8.23	+12.20	-2.42	-32.60	0 6 31.33	53 46 8.7
0 6 38.9	9.0	7 32.96	6 58.7	2 34.00	-26.45	+0 8.24	+10.61	-2.44	-32.40	0 7 41.89	52 22 0.6
0 9 0.9	8.2	9 55.04	9 17.6	26 39.50	-27.78	+0 8.23	+12.47	-2.64	-32.70	0 10 3.78	53 57 55.4
0 9 0.9	9.1	9 55.46	9 25.5	26 39.50	-22.29	+0 8.23	+12.60	-2.64	-32.80	0 10 4.20	53 58 0.9
0 9 54.8	8.8	10 47.98	10 31.6	43 18.40	-12.55	+0 8.24	+11.09	-2.50	-32.40	0 10 56.87	52 41 30.6
0 10 56.1	7.9	11 49.48	11 29.5	10 48.85	-15.47	+0 8.24	+10.76	-2.52	-32.40	0 11 58.36	52 13 56.9
0 11 35.8	9.1	12 29.20	12 17.4	5 16.90	- 9.10	+0 8.24	+11.04	-2.53	-32.40	0 12 38.08	52 19 35.5
0 12 59.9	9.4	13 54.00	13 25.4	58 54.10	-22.02	+0 8.24	+10.65	-2.55	-32.40	0 14 2.87	52 25 45.0
0 14 11.4	8.5	15 5.84	14 34.1	37 22.30	-24.14	+0 8.24	+11.14	-2.57	-32.50	0 15 14.70	52 47 15.1
0 15 0.7	8.5	15 56.28	15 40.2	54 53.55	-12.38	+0 8.24	+10.79	-2.58	-32.40	0 16 5.13	52 29 55.3
0 16 6.3	8.7	17 1.16	16 42.0	27 25.40	-15.27	+0 8.23	+ 9.23	-2.60	-32.20	0 17 9.98	50 57 19.2
0 17 7.1	9.8	18 2.96	17 41.3	21 36.05	-17.23	+0 8.23	+ 9.39	-2.62	-32.20	0 18 11.77	51 3 6.8
0 18 56.5	8.4	19 51.88	19 26.2	50 33.50	-19.72	+0 8.24	+11.15	-2.64	-32.40	0 20 0.70	52 34 8.4
0 20 2.5	7.8	20 57.30	20 37.4	8 54.90	-15.38	+0 8.24	+10.57	-2.66	-32.30	0 21 6.11	52 15 50.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s "	"	h m s	° ' "
0 35 46.4	8.5	36 45.04	36 25.5	48 7.50	-14.95	+0 8.24	+11.05	-2.89	-32.50	0 36 53.74	52 36 38.8
0 37 0.3	8.7	37 58.92	37 36.0	32 52.00	-17.46	+0 8.24	+11.32	-2.90	-32.50	0 38 7.62	52 51 52.0
0 37 41.2	9.3	38 40.00	39 1.4	47 3.75	+16.40	+0 8.24	+11.16	-2.92	-32.30	0 38 48.69	52 38 14.1
0 39 7.1	8.9	40 5.66	39 41.0	57 29.20	-19.00	+0 8.24	+10.86	-2.94	-32.30	0 40 14.33	52 27 13.0
0 39 55.8	8.9	40 54.78	40 29.0	8 34.15	-19.94	+0 8.24	+10.54	-2.94	-32.40	0 41 3.46	52 16 6.6
0 41 4.4	9.2	42 4.20	41 38.2	52 55.55	-19.97	+0 8.24	+10.89	-2.97	-32.40	0 42 12.86	52 31 45.5
0 42 13.8	8.1	43 11.98	42 43.4	27 38.10	-23.24	+0 8.23	+ 8.02	-2.97	-31.90	0 43 20.61	49 56 57.3
0 43 25.1	8.0	44 24.58	43 56.5	53 26.60	-22.56	+0 8.23	+ 8.55	-2.99	-32.00	0 44 33.20	50 31 9.9
0 44 32.2	9.0	45 31.92	44 58.7	15 50.35	-26.30	+0 8.23	+ 9.40	-3.01	-32.10	0 45 40.54	51 8 43.2
0 45 28.0	8.3	46 27.90	46 6.1	50 2.00	-16.73	+0 8.24	+10.81	-3.03	-32.30	0 46 36.53	52 34 42.3
0 46 15.8	8.3	47 15.66	46 57.6	48 49.10	-13.88	+0 8.24	+10.98	-3.05	-32.30	0 47 24.28	52 35 58.2
0 47 41.5	9.0	48 41.34	48 8.7	10 0.70	-25.20	+0 8.24	+10.71	-3.07	-32.20	0 48 49.95	52 14 35.1
0 48 56.1	7.7	49 56.42	49 13.5	46 56.40	-32.88	+0 8.24	+10.81	-3.08	-32.30	0 50 5.03	52 37 31.7
0 49 51.2	9.1	50 51.86	50 33.5	49 51.05	-14.12	+0 8.24	+10.89	-3.09	-32.30	0 51 0.47	52 34 55.8
0 51 7.0	9.0	52 7.52	51 42.1	8 13.45	-19.62	+0 8.24	+10.60	-3.13	-32.20	0 52 16.09	52 16 27.7
0 52 42.8	9.6	53 44.86	53 17.4	1 55.75	-21.20	+0 8.24	+10.82	-3.15	-32.20	0 53 53.43	52 22 44.0
0 55 25.2	7.8	56 26.60	55 58.6	59 41.80	-21.57	+0 8.24	+10.57	-3.19	-32.30	0 56 35.15	52 24 57.2
0 56 23.2	9.1	57 24.88	57 8.4	51 37.30	-12.67	+0 8.24	+11.15	-3.19	-32.10	0 57 33.43	52 33 11.4
0 57 24.3	8.4	58 25.52	58 4.7	16 14.80	-16.12	+0 8.24	+10.67	-3.21	-32.10	0 58 34.06	52 8 29.9
0 58 33.7	7.0	59 35.58	59 3.8	34 53.40	-24.26	+0 8.24	+10.98	-3.21	-32.10	0 59 44.14	52 49 43.4
0 59 37.4	8.5	0 39.32	0 16.5	14 53.45	-17.66	+0 8.24	+10.35	-3.24	-32.00	1 0 47.84	52 9 49.4
ZONE 360, DECEMBER 3, 1874.											
23 50 44.5	8.8	51 35.76	51 27.6	16 23.30	- 6.63	+0 8.22	+ 8.24	-2.22	-31.80	23 51 44.77	50 8 28.9
23 51 52.3	7.5	52 43.14	.....	.....	.....	+0 8.22	.....	-2.20	.....	23 52 52.18	.....
23 53 2.5	9.0	53 53.22	53 19.3	9 54.60	-26.80	+0 8.22	+ 8.83	-2.25	-32.10	23 54 2.23	51 14 37.7
23 53 52.0	8.5	54 43.84	54 54.4	54 34.60	+ 8.15	+0 8.22	+10.53	-2.24	-32.30	23 54 52.85	52 30 34.2
23 55 6.9	8.7	55 58.04	55 36.2	16 39.20	-17.28	+0 8.22	+ 9.19	-2.28	-32.10	23 56 7.02	51 8 3.0
23 55 47.1	9.2	56 38.16	56 25.6	35 39.50	- 9.39	+0 8.21	+12.32	-2.26	-32.50	23 56 47.16	53 49 13.3
23 57 13.4	8.8	58 5.58	57 37.2	4 41.10	-22.89	+0 8.22	+ 7.96	-2.33	-32.00	23 58 14.53	50 19 54.4
23 58 35.9	8.5	59 27.72	58 59.1	49 47.30	-21.94	+0 8.22	+10.41	-2.31	-32.30	23 59 36.70	52 34 51.3
23 59 32.0	8.5	0 23.88	0 10.1	56 55.80	-10.62	+0 8.22	+10.70	-2.33	-32.40	0 0 32.85	52 27 54.3
0 0 38.2	9.0	1 30.64	1 13.3	25 26.65	-14.04	+0 8.22	+ 8.12	-2.37	-32.00	0 1 39.57	49 59 17.8
0 2 20.1	8.1	3 13.42	2 45.3	40 57.90	-22.46	+0 8.22	+ 8.73	-2.38	-32.10	0 3 22.36	50 43 38.7
0 3 25.7	8.9	4 19.56	3 58.9	30 5.50	-16.48	+0 8.22	+ 9.08	-2.39	-32.10	0 4 28.49	50 52 37.4
0 4 20.2	8.3	5 13.48	4 54.0	21 17.90	-15.81	+0 8.22	+ 8.07	-2.41	-32.10	0 5 22.40	50 3 24.6
0 5 27.8	9.4	6 22.46	5 48.7	38 26.60	-26.99	+0 8.21	+11.76	-2.40	-32.70	0 6 31.39	53 46 7.9
0 6 38.9	9.0	7 33.12	7 5.9	2 38.70	-20.97	+0 8.22	+10.40	-2.42	-32.50	0 7 42.05	52 22 0.6
0 9 0.9	8.5	9 55.22	9 15.2	26 36.15	-29.71	+0 8.21	+12.03	-2.46	-32.80	0 10 4.12	53 57 55.8
0 9 0.9	9.2	9 55.56	9 23.0	26 36.15	-24.22	+0 8.21	+12.17	-2.46	-32.80	0 10 4.46	53 58 1.4
0 9 54.8	8.9	10 48.02	10 30.8	43 18.45	-13.16	+0 8.22	+10.74	-2.48	-32.50	0 10 56.91	52 41 29.0
0 10 56.1	7.9	11 49.52	11 31.2	10 49.35	-14.25	+0 8.22	+10.46	-2.50	-32.50	0 11 58.40	52 13 56.7
0 11 35.8	9.0	12 29.18	12 18.5	5 17.10	- 8.26	+0 8.22	+10.72	-2.51	-32.50	0 12 38.06	52 19 35.2
0 12 59.9	9.5	13 54.08	13 28.4	58 57.10	-19.79	+0 8.22	+10.36	-2.53	-32.50	0 14 2.95	52 25 43.3
0 14 11.4	8.2	15 6.10	14 54.6	37 38.30	- 8.78	+0 8.22	+11.03	-2.55	-32.60	0 15 14.96	52 47 13.7
ZONE 361, DECEMBER 10, 1874.											
0 15 0.7	9.0	15 54.74	15 34.4	54 52.30	-15.71	+0 9.57	+10.89	-2.41	-33.00	0 16 5.09	52 29 54.0
0 16 6.3	8.8	16 59.62	16 41.8	27 27.95	-14.16	+0 9.59	+ 9.34	-2.44	-32.80	0 17 9.96	50 57 18.5
0 17 7.1	10.0	18 1.48	17 42.4	21 37.80	-15.16	+0 9.58	+ 9.53	-2.45	-32.80	0 18 11.81	51 3 7.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R.A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
0 18 56.5	8.9	19 50.22	19 22.7	50 32.70	-21.10	+0 9.58	+11.32	-2.47	-33.20	0 20 0.55	52 34 8.4
0 20 2.5	8.0	20 55.66	20 24.8	8 47.35	-23.89	+0 9.57	+10.59	-2.49	-33.10	0 21 5.97	52 15 50.3
0 33 6.2	8.5	34 1.30	33 33.8	5 6.00	-21.18	+0 9.57	+11.21	-2.70	-33.20	0 34 11.50	52 19 34.7
0 35 46.4	8.9	36 43.40	36 27.2	48 10.55	-12.42	+0 9.58	+11.23	-2.72	-33.20	0 36 53.61	52 36 38.9
0 37 0.3	8.9	37 57.24	37 35.3	32 53.60	-16.69	+0 9.57	+11.50	-2.75	-33.20	0 38 7.42	52 51 51.9
0 37 41.2	8.9	38 38.32	38 29.4	46 41.80	-6.82	+0 9.58	+11.47	-2.77	-33.10	0 38 48.50	52 38 13.6
0 39 7.1	9.0	40 4.16	39 29.9	57 23.55	-26.39	+0 9.57	+10.90	-2.78	-33.20	0 40 14.32	52 27 11.6
0 39 55.8	8.7	40 53.28	40 34.6	8 41.45	-14.45	+0 9.58	+10.75	-2.80	-33.20	0 41 3.44	52 16 5.5
0 41 4.4	9.0	42 2.74	41 41.2	52 59.25	-16.52	+0 9.57	+11.11	-2.82	-33.20	0 42 12.88	52 31 45.9
0 42 13.8	8.2	43 10.44	42 33.2	27 32.50	-30.23	+0 9.59	+7.97	-2.83	-32.80	0 43 20.57	49 56 56.2
0 43 25.1	8.2	44 23.04	43 54.7	53 26.35	-22.72	+0 9.58	+8.63	-2.84	-32.80	0 44 33.16	50 31 10.5
0 44 32.2	9.0	45 30.36	45 5.1	15 57.95	-20.04	+0 9.59	+9.62	-2.87	-32.90	0 45 40.48	51 8 42.5
0 45 28.0	8.3	46 26.34	45 57.6	49 57.05	-22.02	+0 9.57	+10.88	-2.88	-33.20	0 46 36.45	52 34 42.3
0 46 15.8	8.8	47 14.04	46 56.6	48 50.65	-13.35	+0 9.58	+11.16	-2.89	-33.20	0 47 24.16	52 35 57.7
0 47 41.5	8.6	48 39.80	48 17.2	10 7.75	-17.47	+0 9.57	+11.06	-2.92	-33.10	0 48 49.89	52 14 36.4
0 48 56.1	7.8	49 54.90	49 24.4	47 5.20	-23.38	+0 9.58	+11.20	-2.93	-33.20	0 50 5.00	52 37 33.1
0 49 51.2	9.0	50 50.28	50 37.7	49 55.75	-9.67	+0 9.57	+11.06	-2.94	-33.20	0 51 0.37	52 34 56.1
0 51 7.0	8.8	52 5.92	51 33.1	8 8.35	-25.34	+0 9.58	+10.64	-2.99	-33.10	0 52 15.97	52 16 27.5
0 52 42.8	9.5	53 43.34	53 17.5	1 56.00	-19.89	+0 9.57	+11.00	-3.01	-33.10	0 53 53.38	52 22 45.6
0 55 25.2	8.8	56 25.14	55 54.3	59 41.00	-23.62	+0 9.58	+10.70	-3.03	-33.30	0 56 35.19	52 24 56.3
0 56 23.2	9.4	57 23.26	57 13.2	51 45.20	-7.76	+0 9.57	+11.37	-3.05	-33.10	0 57 33.28	52 33 8.8
0 57 24.3	8.5	58 23.94	58 13.2	16 23.20	-8.29	+0 9.58	+10.93	-3.07	-33.00	0 58 33.96	52 8 29.9
0 58 33.7	6.8	59 34.12	59 5.6	34 55.85	-21.74	+0 9.57	+11.20	-3.09	-33.10	0 59 44.13	52 49 44.0
0 59 37.4	8.8	0 37.88	0 16.7	14 55.65	-16.42	+0 9.58	+10.52	-3.11	-33.00	1 0 47.87	52 9 48.9
ZONE 362, DECEMBER 12, 1874.											
1 32 20.2	8.5	33 24.38	33 7.4	30 0.50	-13.28	+0 10.30	+9.22	-3.54	-32.20	1 33 34.86	50 54 45.0
1 34 34.7	8.8	35 39.92	35 14.0	5 39.45	-19.17	+0 10.29	+12.41	-3.63	-32.60	1 35 50.38	53 19 2.9
1 36 44.9	8.9	37 50.40	37 15.8	35 12.05	-25.20	+0 10.29	+12.88	-3.67	-32.60	1 38 0.85	53 49 24.6
1 38 22.7	7.5	39 28.42	39 2.4	1 58.90	-19.22	+0 10.28	+12.34	-3.69	-32.50	1 39 38.84	53 22 43.3
1 39 29.8	9.0	40 35.76	40 3.8	15 22.70	-23.77	+0 10.28	+12.15	-3.71	-32.40	1 40 46.16	53 9 14.8
1 40 54.5	9.1	42 0.24	41 32.0	51 59.25	-20.76	+0 10.29	+12.50	-3.74	-32.40	1 42 10.64	53 32 41.5
1 41 37.3	8.4	42 42.92	42 24.1	59 3.25	-13.88	+0 10.29	+12.29	-3.75	-32.30	1 42 53.31	53 25 44.3
1 42 44.6	9.0	43 51.30	43 30.2	40 22.75	-15.46	+0 10.29	+12.97	-3.77	-32.30	1 44 1.69	53 44 23.8
1 43 29.0	9.3	44 36.20	44 28.2	9 50.30	-5.93	+0 10.28	+12.07	-3.77	-32.20	1 44 46.57	53 14 29.0
1 44 21.6	8.9	45 28.70	45 9.4	47 1.55	-14.18	+0 10.29	+12.72	-3.79	-32.30	1 45 39.08	53 37 46.0
1 45 25.4	9.3	46 33.14	46 14.9	39 20.55	-13.33	+0 10.30	+12.63	-3.82	-32.20	1 46 43.51	53 45 27.8
1 46 17.5	8.2	47 25.38	46 59.1	41 49.85	-19.29	+0 10.30	+12.73	-3.83	-32.20	1 47 35.74	53 42 52.6
1 48 38.3	8.8	49 46.38	49 18.9	40 51.80	-20.16	+0 10.29	+12.83	-3.86	-32.10	1 49 56.72	53 43 49.9
1 49 31.9	9.1	50 37.86	50 18.6	8 40.15	-15.29	+0 10.31	+8.58	-3.87	-31.50	1 50 48.12	50 16 2.8
1 50 18.9	8.7	51 25.12	51 15.1	25 18.15	-7.97	+0 10.31	+8.67	-3.87	-31.40	1 51 35.38	49 59 32.2
1 51 52.4	9.1	52 57.44	52 25.6	23 2.95	-25.32	+0 10.31	+8.19	-3.79	-31.30	1 53 7.79	50 1 29.6
1 53 1.8	9.0	54 9.00	53 46.2	42 55.40	-17.90	+0 10.30	+9.12	-3.83	-31.40	1 54 19.32	50 41 45.4
1 53 47.7	7.2	54 55.70	54 38.8	19 25.50	-12.28	+0 10.30	+13.02	-3.95	-31.90	1 55 6.01	54 5 24.3
1 54 45.5	7.0	55 52.78	55 29.7	2 45.65	-17.87	+0 10.31	+9.94	-3.88	-31.40	1 56 3.09	51 21 55.9
1 56 20.3	8.7	57 29.06	57 7.3	30 21.85	-16.29	+0 10.31	+12.02	-3.95	-31.60	1 57 39.36	52 54 23.1
1 57 3.1	8.0	58 13.36	57 57.9	42 18.00	-11.37	+0 10.30	+12.81	-3.99	-31.70	1 58 23.64	53 42 32.5
1 58 36.7	8.3	59 46.36	59 14.1	24 14.05	-23.53	+0 10.29	+12.74	-4.02	-31.70	1 59 56.62	54 0 24.2
1 59 35.7	8.6	0 44.10	0 24.5	41 19.15	-14.37	+0 10.30	+12.89	-4.03	-31.40	2 0 54.36	53 43 28.7
2 0 51.4	9.0	2 1.74	1 37.7	53 43.95	-17.68	+0 10.30	+12.36	-4.04	-31.50	2 2 11.99	53 30 59.9
2 1 59.0	8.8	3 8.98	2 41.4	27 6.40	-19.39	+0 10.29	+12.98	-4.07	-31.40	2 3 19.21	53 57 36.4
2 3 26.5	8.4	4 35.28	4 6.1	46 52.05	-21.46	+0 10.29	+12.61	-4.09	-31.30	2 4 45.49	53 37 48.3
2 4 30.0	9.0	5 40.16	5 11.4	9 24.60	-21.35	+0 10.30	+11.92	-4.09	-31.30	2 5 50.38	53 15 15.1

R. A. 1855.o. According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.o.	Mean Dec. 1875.o.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
2 5 13.0	9.5	6 23.70	6 9.0	42 47.10	-10.78	+0 10.30	+12.75	-4.11	-31.30	2 6 33.92	53 42 4.0
2 6 29.8	8.1	7 38.34	7 13.5	6 42.30	-19.29	+0 10.31	+ 9.94	-4.04	-30.80	2 7 48.56	51 17 57.9
2 7 39.2	9.0	8 47.78	8 19.5	31 24.05	-21.64	+0 10.30	+10.64	-4.08	-30.80	2 8 57.98	51 53 14.5
2 8 30.1	8.8	9 39.16	9 21.5	30 28.75	-13.23	+0 10.31	+12.06	-4.13	-31.00	2 9 49.36	52 54 19.4
2 9 54.2	7.6	11 3.38	10 35.1	25 39.95	-21.60	+0 10.31	+10.83	-4.11	-30.80	2 11 13.58	51 58 58.7
2 10 38.0	9.4	11 47.94	11 34.5	16 58.45	- 9.96	+0 10.30	+12.20	-4.15	-31.00	2 11 58.13	53 7 53.0
2 11 43.6	9.5	12 55.46	12 31.2	32 21.90	-17.90	+0 10.29	+12.89	-4.22	-30.70	2 13 5.61	53 52 22.5
2 13 36.1	9.4	14 47.42	14 19.9	14 3.95	-20.42	+0 10.30	+11.90	-4.21	-30.70	2 14 57.57	53 10 36.9
2 14 25.7	8.9	15 37.00	15 15.4	12 30.95	-16.03	+0 10.29	+12.15	-4.22	-30.70	2 15 47.14	53 12 14.5
2 15 28.1	9.3	16 39.14	16 19.5	18 7.40	-14.58	+0 10.30	+12.01	-4.24	-30.60	2 16 49.27	53 6 39.4
2 16 24.6	8.7	17 37.58	17 15.4	51 13.80	-16.42	+0 10.30	+12.68	-4.27	-30.60	2 17 47.71	53 33 31.8
2 28 36.5	9.0	29 52.14	29 37.9	31 53.70	-10.37	+0 10.31	+13.06	-4.46	-29.90	2 30 2.18	53 52 58.4
2 30 13.1	9.0	31 28.14	31 13.5	40 58.65	-18.03	+0 10.31	+12.87	-4.47	-31.80	2 31 38.17	53 43 43.6
2 31 5.0	8.4	32 18.02	31 59.2	26 44.55	-13.70	+0 10.31	+13.13	-4.49	-31.70	2 32 28.05	53 58 2.3
2 32 8.0	9.0	33 21.38	32 49.6	46 10.65	-23.36	+0 10.30	+12.64	-4.49	-31.60	2 33 31.39	53 38 26.1
2 33 13.7	9.0	34 25.88	33 52.5	11 19.95	-25.35	+0 10.32	+10.96	-4.44	-31.30	2 34 35.91	52 13 13.4
2 36 19.6	7.0	37 33.22	37 4.1	51 45.25	-21.42	+0 10.31	+12.53	-4.55	-29.30	2 37 43.20	53 32 55.4
2 37 25.8	8.4	38 42.10	38 15.6	49 53.60	-19.50	+0 10.31	+12.30	-4.57	-29.20	2 38 52.07	53 34 48.8
2 38 27.0	7.5	39 40.20	39 34.7	46 19.15	- 4.04	+0 10.30	+12.90	-4.58	-29.10	2 39 50.16	53 38 39.3
2 39 23.7	8.8	40 38.28	40 15.4	0 30.20	-16.91	+0 10.31	+12.57	-4.58	-29.10	2 40 48.24	53 24 15.0
ZONE 363, DECEMBER 16, 1874.											
1 31 1.7	7.0	32 5.04	31 32.9	10 37.00	-23.81	+0 11.67	+12.12	-3.51	-33.10	1 32 16.97	53 14 0.0
1 32 20.2	9.2	33 23.00	32 54.7	29 49.40	-22.11	+0 11.66	+ 8.99	-3.48	-32.60	1 33 34.90	50 54 46.6
1 34 34.7	8.9	35 38.38	35 6.8	5 31.20	-23.39	+0 11.67	+12.23	-3.56	-33.00	1 35 50.29	53 19 6.3
1 36 44.9	8.9	37 48.92	37 21.9	35 17.80	-19.74	+0 11.67	+12.90	-3.60	-33.00	1 38 0.82	53 49 23.9
1 38 22.7	7.8	39 27.00	38 55.4	1 55.50	-23.36	+0 11.66	+12.15	-3.62	-32.90	1 39 38.87	53 22 41.9
1 39 29.8	9.0	40 34.30	40 10.8	15 28.70	-17.46	+0 11.66	+12.18	-3.64	-32.90	1 40 46.15	53 9 14.6
1 40 54.5	9.1	41 58.86	41 38.7	52 2.05	-14.87	+0 11.66	+12.50	-3.67	-32.90	1 42 10.70	53 32 44.1
1 41 37.3	8.4	42 41.42	42 25.7	59 4.00	-11.59	+0 11.66	+12.17	-3.68	-32.80	1 42 53.25	53 25 45.2
1 42 44.6	8.5	43 49.78	43 25.2	40 18.70	-18.03	+0 11.67	+12.83	-3.70	-32.80	1 44 1.62	53 44 24.7
1 43 29.0	8.9	44 34.64	44 30.1	9 49.90	- 3.34	+0 11.66	+11.94	-3.70	-32.70	1 44 46.46	53 14 31.3
1 44 21.6	9.0	45 27.20	45 15.7	47 5.20	- 8.45	+0 11.66	+12.65	-3.73	-32.80	1 45 39.01	53 37 47.5
1 45 25.4	8.9	46 31.54	46 17.8	39 21.95	-10.03	+0 11.67	+12.52	-3.75	-32.70	1 46 43.35	53 45 29.1
1 46 17.5	8.4	47 23.87	47 2.5	41 52.15	-15.69	+0 11.67	+12.66	-3.76	-32.70	1 47 35.67	53 42 53.3
1 48 38.3	8.7	49 44.86	49 21.0	40 52.40	-17.52	+0 11.67	+12.77	-3.79	-32.60	1 49 56.65	53 43 51.4
1 49 31.9	8.8	50 36.36	50 9.1	8 32.25	-21.62	+0 11.64	+ 8.38	-3.72	-32.00	1 50 48.10	50 16 3.6
1 50 18.9	8.7	51 23.76	51 11.2	25 14.70	-10.04	+0 11.64	+ 8.60	-3.72	-31.90	1 51 35.50	49 59 33.0
1 51 52.4	9.2	52 56.04	.....	.....	.....	+0 11.64	.....	-3.74	.....	1 53 7.77	.....
1 53 1.8	9.0	54 7.56	53 59.3	43 7.70	- 6.51	+0 11.65	+ 9.11	-3.78	-31.90	1 54 19.28	50 41 44.0
1 53 47.7	7.5	54 54.04	.....	.....	.....	+0 11.67	.....	-3.89	.....	1 55 5.78	.....
1 54 45.5	6.9	55 51.20	55 41.5	2 53.70	- 7.50	+0 11.65	+ 9.93	-3.83	-31.90	1 56 2.90	51 21 57.7
1 56 20.3	8.6	57 27.36	56 54.5	30 11.60	-24.58	+0 11.67	+11.80	-3.90	-32.10	1 57 39.07	52 54 24.3
1 59 35.7	8.8	0 42.54	0 12.0	41 9.05	-22.36	+0 11.67	+12.66	-3.97	-32.00	2 0 54.23	53 43 29.9
2 0 51.4	9.0	2 0.30	.....	.....	.....	+0 11.66	.....	-3.98	.....	2 2 11.97	.....
2 1 59.0	8.2	3 7.49	2 48.3	27 7.90	-14.00	+0 11.66	+12.96	-4.03	-32.00	2 3 19.13	53 57 39.6
2 3 26.5	8.0	4 33.80	4 4.5	46 48.45	-21.53	+0 11.65	+12.48	-4.04	-31.90	2 4 45.42	53 37 51.1
2 4 30.0	8.3	5 38.78	5 10.4	9 23.90	-21.05	+0 11.65	+11.80	-4.03	-31.80	2 5 50.41	53 15 15.5
2 5 13.0	9.4	6 22.38	6 18.0	42 51.50	- 3.23	+0 11.66	+12.67	-4.06	-31.80	2 6 34.01	53 42 6.6
2 6 29.8	7.5	7 36.86	7 16.5	6 46.15	-15.81	+0 11.64	+ 9.87	-3.99	-31.40	2 7 48.46	51 17 56.9
2 7 39.2	8.4	8 46.42	8 20.0	31 23.90	-20.19	+0 11.65	+10.57	-4.03	-31.40	2 8 58.02	51 53 15.4
2 8 30.1	8.7	9 37.70	9 19.9	30 26.25	-13.30	+0 11.66	+11.98	-4.07	-31.50	2 9 49.31	52 54 21.2
2 10 38.0	9.2	11 46.32	11 28.3	16 53.40	-13.38	+0 11.65	+12.07	-4.11	-31.60	2 11 57.90	53 7 53.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
2 11 43.6	9.4	12 53.70	12 22.2	32 14.80	-23.01	+0 11.66	+12.69	-4.17	-31.30	2 13 5.27	53 52 23.7
2 13 36.1	9.3	14 45.70	14 10.2	13 57.65	-26.36	+0 11.65	+11.64	-4.16	-31.30	2 14 57.25	53 10 36.4
2 14 25.7	8.2	15 35.32	15 15.1	12 29.00	-14.99	+0 11.65	+12.06	-4.18	-31.30	2 15 46.86	53 12 16.7
2 15 28.1	9.4	16 37.36	16 32.0	18 17.15	-4.02	+0 11.65	+11.96	-4.09	-31.20	2 16 48.99	53 6 39.5
2 28 36.5	9.1	29 50.70	29 33.2	31 49.10	-12.78	+0 11.65	+12.93	-4.42	-31.50	2 30 2.12	53 52 58.8
2 30 13.1	9.2	31 26.68	31 3.8	40 58.25	-16.79	+0 11.65	+12.78	-4.43	-31.40	2 31 38.09	53 43 45.5
2 31 5.0	8.8	32 16.44	32 2.0	26 46.00	-10.50	+0 11.65	+13.06	-4.46	-31.40	2 32 27.84	53 58 4.3
2 32 8.0	9.0	33 19.94	32 59.0	46 18.50	-15.35	+0 11.64	+12.68	-4.45	-31.30	2 33 31.33	53 38 26.6
2 33 13.7	9.4	34 24.48	33 59.7	11 24.05	-18.82	+0 11.64	+10.96	-4.40	-31.00	2 34 35.87	52 13 16.1
2 37 25.8	9.2	38 40.64	38 12.4	49 50.05	-20.75	+0 11.64	+12.13	-4.53	-29.90	2 38 51.98	53 34 50.2
ZONE 364, JANUARY 10, 1875.											
2 51 24.7	8.9	52 25.12	51 52.6	9 33.55	-25.95	+0 25.62	+12.10	-0.05	-17.40	2 52 50.69	53 15 0.4
2 55 50.8	9.0	56 53.90	56 23.6	26 8.40	-23.79	+0 25.64	+13.54	-0.10	-17.60	2 57 19.44	53 58 29.0
3 17 15.4	9.3	18 16.84	17 56.0	29 53.75	-17.51	+0 25.63	+9.42	-0.32	-16.80	3 18 42.15	50 54 46.6
3 20 15.2	8.5	21 16.04	20 49.1	48 44.85	-22.79	+0 25.63	+9.10	-0.34	-16.70	3 21 41.33	50 35 50.0
3 23 3.0	9.1	24 5.78	23 37.9	35 15.35	-23.02	+0 25.64	+11.06	-0.38	-17.00	3 24 31.04	51 49 20.9
3 26 10.2	9.2	27 15.02	26 41.7	3 9.35	-26.47	+0 25.65	+12.42	-0.42	-17.30	3 27 40.25	53 21 24.6
3 29 18.3	9.3	30 25.70	29 55.9	22 15.40	-22.79	+0 25.67	+14.63	-0.47	-17.60	3 30 50.90	55 2 24.1
3 31 1.1	9.3	32 7.38	32 15.4	13 20.45	+6.25	+0 25.66	+13.70	-0.48	-17.40	3 32 32.56	54 11 47.3
3 31 4.8	9.0	32 11.26	31 45.6	13 20.45	-20.07	+0 25.66	+13.55	-0.48	-17.40	3 32 36.44	54 11 20.9
3 33 30.7	8.7	34 33.26	34 8.1	0 27.90	-20.98	+0 25.65	+10.57	-0.48	-16.70	3 34 58.43	51 24 10.2
3 35 40.4	9.0	36 44.90	36 12.8	21 24.35	-26.35	+0 25.66	+11.12	-0.51	-16.90	3 37 10.05	52 3 8.8
3 37 50.8	7.5	38 54.32	38 27.4	58 31.20	-22.38	+0 25.65	+10.16	-0.52	-16.70	3 39 19.45	51 26 5.1
3 40 26.0	8.7	41 30.32	41 5.9	40 52.45	-20.62	+0 25.65	+9.70	-0.54	-16.50	3 41 55.43	50 43 45.4
3 42 43.7	7.7	43 48.10	43 21.1	30 45.05	-21.74	+0 25.67	+12.27	-0.58	-16.95	3 44 13.19	52 53 53.8
3 44 40.4	7.0	45 45.54	45 8.9	8 20.40	-29.89	+0 25.67	+11.02	-0.60	-16.80	3 46 10.61	52 16 9.2
3 47 27.8	...	48 34.52	48 5.5	47 10.20	-22.96	+0 25.67	+12.95	-0.64	-17.05	3 48 59.55	53 37 28.0
3 49 24.4	...	50 31.12	50 8.5	49 27.35	-18.33	+0 25.67	+11.44	-0.65	-16.80	3 50 56.14	52 35 14.2
ZONE 365, JANUARY 11, 1875.											
2 51 24.7	9.1	52 24.38	52 9.3	9 46.40	-12.06	+0 26.47	+12.13	-0.04	-17.50	2 52 50.81	53 15 2.5
2 55 50.8	9.2	56 53.08	56 27.0	26 9.80	-20.49	+0 26.49	+13.45	-0.08	-17.70	2 57 19.49	53 58 31.8
3 17 15.4	9.4	18 16.22	18 3.5	30 1.00	-10.69	+0 26.47	+10.01	-0.30	-16.90	3 18 42.39	50 54 47.7
3 20 15.2	8.4	21 15.24	20 48.8	48 45.40	-22.28	+0 26.47	+9.16	-0.33	-16.80	3 21 41.38	50 35 51.0
3 23 3.8	7.9	24 6.80	23 38.4	32 43.75	-23.41	+0 26.48	+10.60	-0.36	-17.10	3 24 32.92	51 51 52.6
3 26 10.2	9.0	27 14.12	26 46.0	3 12.80	-22.39	+0 26.50	+12.35	-0.40	-17.40	3 27 40.22	53 21 26.1
3 29 18.3	9.2	30 24.74	29 55.6	22 14.10	-22.26	+0 26.53	+14.50	-0.45	-17.70	3 30 50.82	55 2 26.8
3 31 1.1	9.3	32 6.54	32 9.1	13 16.45	+2.03	+0 26.51	+13.58	-0.46	-17.50	3 32 32.59	54 11 48.0
3 31 4.8	8.9	32 10.34	31 40.2	13 16.45	-23.51	+0 26.51	+13.35	-0.46	-17.50	3 32 36.39	54 11 22.2
3 33 30.7	8.7	34 32.50	34 5.3	0 25.30	-22.65	+0 26.48	+10.40	-0.46	-16.90	3 34 58.52	51 24 11.9
3 35 40.4	8.8	36 44.14	36 9.1	21 22.00	-28.73	+0 26.49	+10.91	-0.49	-17.00	3 37 10.14	52 3 9.5
3 37 50.8	7.5	38 53.60	38 26.2	58 29.20	-22.80	+0 26.48	+10.00	-0.51	-16.80	3 39 19.57	51 26 7.5
3 40 26.0	8.7	41 29.50	41 5.1	40 50.85	-20.62	+0 26.47	+9.58	-0.52	-16.60	3 41 55.45	50 43 47.8
3 42 43.7	8.0	43 47.32	43 16.3	30 40.70	-24.97	+0 26.50	+12.10	-0.57	-17.10	3 44 13.25	52 53 55.6
3 44 40.4	6.9	45 44.76	45 33.4	8 38.68	-9.31	+0 26.50	+11.16	-0.58	-16.95	3 46 10.68	52 16 12.5
3 47 27.8	6.7	48 33.64	48 8.8	47 11.30	-19.63	+0 26.51	+12.89	-0.63	-17.15	3 48 59.52	53 37 31.1
3 49 24.4	9.0	50 30.34	50 14.8	49 32.00	-12.57	+0 26.51	+11.38	-0.63	-16.90	3 50 56.22	52 35 16.2
3 52 50.7	9.0	53 55.34	53 21.8	51 38.40	-27.81	+0 26.49	+10.32	-0.65	-16.60	3 54 21.18	51 32 53.8
3 55 20.6	6.0	56 27.20	56 1.1	44 34.05	-20.64	+0 26.51	+12.59	-0.71	-17.00	3 56 53.00	53 40 7.2

R. A. 1855.0 According to B. D.	Obs Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	^s	^s	["]	^h ^m ^s	[°] ['] ["]
3 57 35.3	7.0	58 39.14	58 6.9	48 14.85	-27.28	+0 26.48	+ 8.97	-0.69	-16.30	3 59 4.93	50 36 16.8
4 2 2.2	9.3	3 6.00	2 40.6	20 25.50	-21.76	+0 26.47	+ 8.84	-0.72	-16.10	4 3 31.75	50 4 11.8
ZONE 366, JANUARY 14, 1875.											
2 51 52.4	7.8	52 49.44	52 20.8	14 11.50	-22.51	+0 28.90	+12.38	+0.03	-17.90	2 53 18.37	53 52 2.2
2 57 22.4	8.9	58 20.74	57 47.1	14 17.10	-26.50	+0 28.92	+12.19	-0.01	-17.90	2 58 49.65	53 51 52.5
3 5 45.2	9.5	6 44.08	6 27.3	7 8.45	-13.42	+0 28.92	+11.75	-0.12	-17.70	3 7 12.88	52 59 14.0
3 18 10.8	8.3	19 11.56	19 25.0	0 30.75	+10.49	+0 28.94	+13.36	-0.27	-17.95	3 19 40.23	54 6 16.9
3 20 32.3	9.4	21 32.94	21 41.2	53 17.30	+ 6.64	+0 28.94	+11.92	-0.29	-17.70	3 22 1.59	53 13 25.3
3 22 38.1	8.6	23 39.90	23 51.7	33 51.55	+ 9.14	+0 28.94	+13.38	-0.31	-18.00	3 24 8.53	54 32 54.7
3 24 38.9	9.4	25 40.34	25 55.6	37 55.50	+12.15	+0 28.94	+12.23	-0.33	-17.80	3 26 8.95	53 28 52.8
3 26 58.5	8.9	27 59.72	27 44.0	46 23.10	-12.52	+0 28.94	+12.24	-0.35	-17.70	3 28 28.31	53 20 0.7
3 29 18.3	8.9	30 22.20	30 2.7	3 54.85	-14.91	+0 28.95	+13.89	-0.39	-18.10	3 30 50.76	55 2 27.8
3 30 54.2	8.5	31 58.20	32 0.5	35 45.50	+ 1.78	+0 28.95	+13.84	-0.41	-17.90	3 32 26.74	54 30 54.0
3 34 39.5	6.8	35 42.78	35 11.0	26 7.50	-24.54	+0 28.95	+13.70	-0.45	-17.90	3 36 11.28	54 40 5.5
3 37 42.0	8.8	38 45.28	38 17.1	31 33.00	-22.35	+0 28.95	+12.42	-0.48	-17.65	3 39 13.75	53 34 41.2
3 39 31.1	8.2	40 34.50	40 26.1	42 31.65	- 6.53	+0 28.95	+13.43	-0.50	-17.80	3 41 2.95	54 23 59.2
3 41 45.8	...	42 48.44	42 34.5	0 7.80	-11.14	+0 28.95	+12.32	-0.51	-17.50	3 43 16.88	53 6 17.6
3 44 19.5	8.4	45 21.72	45 36.1	55 43.55	+11.52	+0 28.96	+12.22	-0.54	-17.50	3 45 50.14	53 11 4.5
3 50 26.1	6.5	51 29.52	51 12.2	35 48.50	-13.73	+0 28.96	+12.58	-0.61	-17.45	3 51 57.87	53 30 34.7
3 53 13.6	7.4	54 18.56	53 46.4	23 2.65	-24.82	+0 28.96	+13.46	-0.65	-17.65	3 54 46.87	54 43 10.1
3 55 20.6	6.5	56 24.52	55 55.8	26 6.45	-22.70	+0 28.96	+12.60	-0.66	-17.40	3 56 52.82	53 40 7.8
3 58 36.9	8.5	59 42.64	59 14.5	34 5.45	-22.29	+0 28.97	+11.99	-0.69	-17.10	4 0 10.92	52 32 8.9
4 2 40.8	9.2	3 48.12	4 7.8	3 56.35	+15.44	+0 28.97	+12.74	-0.75	-17.30	4 4 16.34	54 2 56.3
4 5 25.9	5.5	6 30.30	6 9.0	48 34.30	-17.07	+0 28.97	+11.88	-0.76	-17.10	4 6 58.51	53 17 45.2
4 7 22.4	7.8	8 26.76	8 11.9	54 6.80	-11.91	+0 28.97	+11.72	-0.78	-17.05	4 8 54.95	53 12 17.7
4 10 28.8	...	11 38.74	11 6.1	53 35.00	-25.45	+0 28.98	+12.80	-0.83	-17.20	4 12 6.89	54 12 36.9
ZONE 367, JANUARY 16, 1875.											
2 54 40.6	8.0	55 35.04	55 35.8	58 21.45	+ 0.66	+0 30.89	+10.78	+0.03	-17.60	2 56 5.96	52 8 15.4
2 57 24.4	9.3	58 19.82	57 58.7	11 49.70	-16.59	+0 30.89	+13.07	+0.02	-18.05	2 58 50.73	53 54 31.7
3 5 45.2	...	6 42.30	6 9.5	6 56.10	-26.35	+0 30.90	+11.76	-0.08	-17.85	3 7 13.12	52 59 14.5
3 20 32.3	9.3	21 30.78	21 41.3	53 18.85	+ 8.39	+0 30.90	+12.08	-0.25	-17.90	3 22 1.43	53 13 26.7
3 22 38.1	6.3	23 37.84	23 9.4	33 22.10	-21.99	+0 30.91	+13.47	-0.27	-18.20	3 24 8.48	54 32 54.2
3 24 38.9	9.4	25 38.20	25 15.8	37 28.50	-17.80	+0 30.91	+12.43	-0.29	-17.90	3 26 8.82	53 28 51.2
3 26 10.2	9.0	27 9.64	27 28.2	45 24.95	+14.82	+0 30.91	+12.62	-0.31	-17.90	3 27 40.24	53 21 27.6
3 29 18.3	...	30 20.16	29 58.0	3 54.95	-16.98	+0 30.92	+14.04	-0.36	-18.25	3 30 50.72	55 2 26.9
3 30 54.2	8.3	31 56.18	31 32.8	35 26.60	-18.14	+0 30.91	+13.93	-0.37	-18.10	3 32 26.72	54 30 54.1
3 34 39.5	6.9	35 40.82	35 10.5	26 9.25	-23.39	+0 30.91	+13.93	-0.41	-18.10	3 36 11.32	54 40 6.2
3 37 42.0	8.6	38 43.32	38 22.2	31 39.80	-16.72	+0 30.91	+12.70	-0.44	-17.90	3 39 13.79	53 34 41.3
3 39 31.1	8.3	40 32.42	40 22.3	42 31.35	- 7.85	+0 30.91	+13.62	-0.47	-18.00	3 41 2.86	54 23 59.4
3 41 45.8	8.2	42 46.54	42 15.4	59 54.00	-24.92	+0 30.92	+11.50	-0.48	-17.70	3 43 16.98	53 6 17.9
3 44 19.5	8.2	45 19.80	44 53.4	55 11.75	-21.12	+0 30.92	+12.38	-0.51	-17.70	3 45 50.21	53 11 4.8
3 50 26.1	6.6	51 27.44	50 51.4	35 34.15	-28.58	+0 30.92	+12.58	-0.57	-17.70	3 51 57.79	53 30 35.1
3 53 13.6	6.9	54 16.60	53 44.8	23 5.40	-24.52	+0 30.92	+13.68	-0.62	-17.90	3 54 46.90	54 43 8.9
3 55 20.6	6.2	56 22.56	55 47.3	26 1.40	-27.92	+0 30.91	+12.69	-0.63	-17.60	3 56 52.84	53 40 8.8
3 58 36.9	8.6	59 40.74	59 9.2	34 3.95	-24.99	+0 30.92	+12.16	-0.66	-17.30	4 0 11.00	53 32 8.9
4 2 40.8	8.9	3 46.16	3 21.2	3 22.20	-19.60	+0 30.93	+12.99	-0.72	-17.60	4 4 16.37	54 2 56.6
4 5 25.9	5.0	6 28.24	5 55.1	48 26.15	-26.49	+0 30.93	+11.94	-0.74	-17.35	4 6 58.43	53 17 44.9
4 7 22.4	8.2	8 24.88	7 51.5	53 53.90	-26.70	+0 30.93	+11.75	-0.75	-17.30	4 8 55.06	53 12 16.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
4 10 28.8	9.2	11 36.78	11 12.4	53 43.55	-19.05	+0 30.93	+13.14	-0.80	-17.40	4 12 6.91	54 12 36.1
ZONE 368, JANUARY 20, 1875.											
3 18 10.8	9.0	19 4.98	18 54.8	0 10.45	-7.99	+0 35.43	+13.94	-0.14	-18.40	3 19 40.27	54 6 16.9
3 19 11.5	7.8	20 6.04	20 19.8	10 20.00	+10.58	+0 35.44	+14.86	-0.15	-18.60	3 20 41.33	54 56 26.6
3 21 26.6	9.0	22 20.72	22 6.0	2 39.25	-11.52	+0 35.44	+13.50	-0.17	-18.40	3 22 55.99	54 3 44.1
3 36 34.7	8.3	37 31.84	37 33.4	42 10.80	+1.42	+0 35.45	+14.02	-0.35	-18.40	3 38 6.94	54 24 26.0
3 38 32.6	8.2	39 28.90	39 13.1	46 29.55	-12.30	+0 35.45	+13.97	-0.37	-18.40	3 40 3.98	54 19 53.5
3 40 36.0	8.3	41 34.26	41 21.8	21 38.90	-9.87	+0 35.44	+13.29	-0.39	-18.20	3 42 9.31	53 44 46.1
3 43 2.0	9.2	43 59.88	43 34.0	34 25.25	-20.06	+0 35.45	+13.66	-0.42	-18.40	3 44 34.91	54 31 49.7
3 45 27.9	9.0	46 24.36	46 44.4	35 29.35	+15.50	+0 35.45	+14.21	-0.44	-18.40	3 46 59.37	54 31 21.8
3 49 31.0	9.5	50 28.50	50 4.4	59 59.15	-18.87	+0 35.46	+13.10	-0.50	-18.20	3 51 3.46	54 6 16.7
3 54 22.8	9.0	55 21.44	54 48.2	26 53.05	-25.63	+0 35.46	+14.07	-0.56	-18.30	3 55 56.34	54 39 16.9
3 57 31.8	...	58 30.22	58 10.2	18 1.70	-15.76	+0 35.46	+13.11	-0.58	-18.10	3 59 5.10	53 48 17.3
4 1 27.8	9.0	2 26.16	2 24.0	39 47.65	-1.75	+0 35.46	+12.51	-0.62	-17.90	4 3 1.00	53 26 45.0
4 3 57.8	8.3	4 55.42	4 38.2	43 22.55	-13.70	+0 35.46	+12.55	-0.65	-17.85	4 5 30.23	53 22 58.2
4 6 32.8	8.4	7 31.32	6 57.7	25 35.90	-26.57	+0 35.46	+13.12	-0.68	-17.80	4 8 6.10	53 40 32.6
4 9 41.5	9.0	10 43.34	10 28.8	13 24.30	-11.14	+0 35.49	+14.36	-0.75	-18.10	4 11 18.08	54 53 0.6
4 12 45.3	...	13 42.96	13 6.1	53 59.05	-29.50	+0 35.47	+11.94	-0.75	-17.60	4 14 17.68	53 12 5.6
ZONE 369, JANUARY 25, 1875.											
3 19 11.5	8.0	20 0.12	19 40.4	9 50.85	-15.11	+0 41.40	+13.51	-0.03	-18.90	3 20 41.49	54 56 26.6
3 21 26.6	9.0	22 14.60	22 7.3	2 43.15	-5.72	+0 41.39	+12.94	-0.06	-18.70	3 22 55.93	54 3 43.3
3 23 37.7	9.0	24 25.86	24 10.2	56 55.40	-12.57	+0 41.38	+11.99	-0.09	-18.50	3 25 7.15	53 9 23.5
3 26 10.2	8.9	26 58.84	26 31.3	44 41.35	-21.91	+0 41.38	+11.63	-0.12	-18.50	3 27 40.10	53 21 27.8
3 29 18.3	9.2	30 9.44	29 34.6	3 38.60	-26.62	+0 41.40	+13.62	-0.15	-18.95	3 30 50.69	55 2 27.4
3 32 19.5	9.3	33 9.74	32 33.6	23 54.25	-28.52	+0 41.39	+12.02	-0.19	-18.60	3 33 50.94	53 42 8.6
3 36 34.7	8.8	37 25.90	36 54.7	41 43.40	-24.24	+0 41.40	+13.26	-0.23	-18.80	3 38 7.07	54 24 24.8
3 40 36.0	8.5	41 28.24	41 4.5	21 26.70	-18.71	+0 41.39	+12.67	-0.28	-18.60	3 42 9.35	53 44 46.6
3 43 2.0	9.2	43 53.88	43 17.4	34 13.80	-28.28	+0 41.40	+12.90	-0.31	-18.80	3 44 34.97	54 31 50.0
3 49 31.0	9.5	50 22.46	49 51.7	59 51.20	-24.10	+0 41.41	+12.43	-0.39	-18.70	3 51 3.48	54 6 16.4
3 51 4.9	9.0	51 55.86	51 41.1	42 24.50	-11.78	+0 41.40	+12.21	-0.40	-18.45	3 52 36.86	53 23 55.4
3 53 25.1	8.4	54 16.88	.....	.....	.....	+0 41.41	.....	-0.44	.....	3 54 57.85	.....
3 54 22.8	9.1	55 15.44	54 40.3	26 48.45	-27.10	+0 41.41	+13.46	-0.45	-18.75	3 55 56.40	54 39 17.1
3 57 31.8	9.2	58 24.34	58 0.4	17 56.75	-18.84	+0 41.40	+12.49	-0.48	-18.50	3 59 5.26	53 48 16.3
4 1 27.8	8.9	2 20.14	2 0.6	39 30.45	-15.50	+0 41.40	+11.89	-0.52	-18.40	4 3 1.02	53 26 45.5
4 3 57.8	8.2	4 49.50	4 37.3	43 22.15	-9.72	+0 41.41	+12.05	-0.55	-18.30	4 5 30.36	53 22 59.8
4 6 32.8	8.3	7 25.38	6 54.4	25 34.55	-24.51	+0 41.41	+12.63	-0.58	-18.30	4 8 6.21	53 40 33.2
4 9 41.5	8.8	10 37.36	10 6.9	13 8.95	-23.42	+0 41.43	+13.58	-0.64	-18.60	4 11 18.15	54 53 0.6
4 12 45.3	6.9	13 36.86	13 11.4	54 5.45	-20.30	+0 41.41	+11.60	-0.65	-18.20	4 14 17.62	53 12 5.6
4 15 59.2	...	16 49.80	16 23.9	41 29.30	-22.03	+0 41.40	+8.77	-0.65	-17.40	4 17 30.55	50 24 38.0
4 17 39.9	7.2	18 30.74	18 13.0	59 52.30	-14.53	+0 41.42	+10.29	-0.69	-17.80	4 19 11.47	52 6 23.6
4 19 27.4	8.0	20 18.98	19 53.7	4 25.50	-20.78	+0 41.42	+10.20	-0.71	-17.75	4 20 59.69	52 1 44.1
4 21 22.9	9.1	22 16.00	22 3.7	33 35.60	-9.99	+0 41.42	+11.08	-0.73	-17.80	4 22 56.69	52 32 45.6
4 21 59.1	6.9	22 50.06	22 42.4	34 19.90	-6.25	+0 41.42	+10.94	-0.74	-17.80	4 23 30.74	52 32 4.9
4 22 46.7	8.9	23 39.52	23 19.5	41 7.20	-16.29	+0 41.42	+11.22	-0.75	-17.80	4 24 20.19	52 25 7.9
4 24 45.8	8.8	25 35.74	25 16.7	45 26.90	-16.19	+0 41.40	+8.92	-0.74	-17.20	4 26 16.40	50 20 46.6
4 25 43.7	8.6	26 34.80	26 9.9	4 33.90	-20.45	+0 41.42	+10.18	-0.77	-17.50	4 27 15.45	52 1 36.3
4 27 0.6	8.8	27 53.30	27 25.8	20 39.15	-22.21	+0 41.42	+11.61	-0.80	-17.80	4 28 33.92	52 45 30.4
4 28 35.0	8.0	29 28.04	29 38.8	32 37.55	+8.77	+0 41.42	+11.24	-0.81	-17.70	4 30 8.65	52 34 2.7

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
4 31 7.9	9.2	31 59.36	31 32.1	16 1.70	-23.02	+0 41.40	+ 9.29	-0.81	-17.20	4 32 39.95	50 50 5.3
4 32 37.3	8.3	33 30.92	33 4.3	21 6.25	-21.49	+0 41.43	+11.52	-0.86	-17.60	4 34 11.49	52 45 4.1
4 34 31.8	8.0	35 23.92	34 57.6	33 33.85	-21.35	+0 41.43	+10.93	-0.87	-17.50	4 36 4.48	52 32 36.2
4 35 23.4	8.6	36 15.04	35 54.0	1 8.80	-17.61	+0 41.42	+ 9.67	-0.86	-17.20	4 36 55.60	51 5 4.0
4 36 35.3	7.2	37 27.78	36 58.2	12 33.85	-23.84	+0 41.44	+11.43	-0.91	-17.60	4 38 8.31	52 53 34.1
4 37 29.9	9.5	38 22.14	38 7.7	23 10.05	-12.17	+0 41.41	+ 9.01	-0.88	-17.05	4 39 2.67	50 43 7.7
4 38 41.6	9.0	39 32.52	39 8.1	54 27.40	-20.85	+0 41.41	+ 8.06	-0.88	-16.90	4 40 13.05	50 11 40.9
4 39 32.9	7.4	40 23.84	40 1.4	54 52.80	-19.14	+0 41.41	+ 8.01	-0.89	-16.90	4 41 4.36	50 11 17.1
4 40 40.0	9.1	41 31.70	41 11.6	47 31.90	-17.14	+0 41.41	+ 8.50	-0.90	-16.90	4 42 12.21	50 18 40.6
4 43 40.7	8.7	44 32.44	44 4.9	37 34.40	-22.36	+0 41.43	+10.98	-0.97	-17.30	4 45 12.90	52 28 34.9
4 44 39.9	5.8	45 32.52	45 3.8	26 20.50	-23.24	+0 41.44	+11.37	-0.99	-17.30	4 46 12.97	52 39 48.3
4 45 53.2	9.2	46 45.64	46 22.6	7 47.00	-19.33	+0 41.43	+ 9.31	-0.97	-16.90	4 47 26.10	50 58 24.0
4 46 50.3	9.6	47 45.76	47 25.0	53 9.15	-16.63	+0 41.44	+11.83	-1.02	-17.40	4 48 26.18	53 13 6.6
4 48 20.0	7.7	49 14.06	48 44.9	50 41.65	-23.32	+0 41.44	+12.18	-1.04	-17.40	4 49 54.46	53 15 27.8
4 49 24.4	9.3	50 20.12	49 48.8	42 53.55	-24.92	+0 41.44	+11.93	-1.05	-17.35	4 51 0.51	53 23 14.1
4 51 30.4	8.8	52 22.32	51 59.3	45 51.70	-19.60	+0 41.42	+ 8.83	-1.01	-16.60	4 53 2.73	50 20 18.9
4 52 15.0	8.6	53 9.90	52 52.5	2 54.90	-13.96	+0 41.44	+11.72	-1.07	-17.20	4 53 50.27	53 3 23.6
ZONE 370, JANUARY 26, 1875.											
4 15 59.2	9.0	16 48.60	16 17.5	41 24.95	-26.46	+0 42.57	+ 8.85	-0.63	-17.50	4 17 30.54	50 24 37.5
4 16 34.4	8.5	17 23.24	17 11.1	8 20.20	-10.17	+0 42.58	+ 9.45	-0.65	-17.60	4 18 5.17	50 57 59.0
4 17 39.9	8.1	18 29.64	18 1.8	59 45.35	-22.83	+0 42.59	+10.40	-0.67	-17.90	4 19 11.56	52 6 21.8
4 19 27.4	8.1	20 17.76	19 53.6	4 26.80	-19.88	+0 42.59	+10.42	-0.69	-17.85	4 20 59.66	52 1 43.4
4 20 45.2	9.1	21 34.92	21 9.4	56 18.50	-21.35	+0 42.58	+ 9.88	-0.69	-17.61	4 22 16.81	51 9 49.9
4 21 22.9	8.7	22 14.76	22 4.8	33 37.45	- 8.12	+0 42.60	+11.27	-0.72	-17.90	4 22 56.64	52 32 45.3
4 21 59.1	7.0	22 48.94	22 37.3	34 17.45	- 9.42	+0 42.60	+11.16	-0.72	-17.90	4 23 30.82	52 32 3.9
4 22 46.7	9.0	23 38.34	23 21.8	41 9.95	-13.44	+0 42.61	+11.48	-0.73	-17.90	4 24 20.22	52 25 7.7
4 24 45.8	8.8	25 34.60	25 4.8	45 18.20	-25.39	+0 42.58	+ 8.97	-0.72	-17.30	4 26 16.46	50 20 45.6
4 25 43.7	8.3	26 33.74	26 10.7	4 36.40	-18.89	+0 42.60	+10.42	-0.76	-17.70	4 27 15.58	52 1 35.0
4 27 0.6	8.8	27 52.16	27 28.7	20 42.15	-18.98	+0 42.61	+11.88	-0.78	-17.90	4 28 33.99	52 45 30.4
4 28 35.0	7.9	29 26.94	28 51.3	31 59.30	-28.89	+0 42.61	+11.25	-0.80	-17.80	4 30 8.75	52 34 2.8
4 30 2.0	9.4	30 52.46	30 54.7	9 56.45	+ 1.85	+0 42.59	+ 9.20	-0.79	-17.40	4 31 34.26	50 56 34.7
4 31 7.9	9.4	31 58.28	31 51.0	16 20.55	- 6.16	+0 42.59	+ 9.63	-0.79	-17.30	4 32 40.08	50 50 3.1
4 32 37.3	8.6	33 29.78	33 5.8	21 8.40	-19.39	+0 42.61	+11.78	-0.84	-17.80	4 34 11.55	52 45 3.7
4 34 31.8	8.0	35 22.72	34 48.1	33 28.80	-28.09	+0 42.62	+11.01	-0.86	-17.70	4 36 4.48	52 32 33.9
4 35 23.4	8.2	36 13.92	35 52.5	1 9.90	-17.95	+0 42.60	+ 9.86	-0.83	-17.30	4 36 55.69	51 5 2.2
4 36 35.3	7.8	37 26.60	36 51.4	12 30.80	-28.35	+0 42.63	+11.55	-0.89	-17.70	4 38 8.34	52 53 32.2
4 37 29.9	9.4	38 20.96	37 57.8	23 4.05	-19.61	+0 42.59	+ 9.08	-0.86	-17.15	4 39 2.69	50 43 5.8
4 38 41.6	8.8	39 31.46	38 58.5	54 21.10	-28.20	+0 42.59	+ 8.08	-0.86	-17.00	4 40 13.19	50 11 39.3
4 39 32.9	7.8	40 22.70	40 4.3	54 58.30	-15.73	+0 42.59	+ 8.17	-0.87	-17.00	4 41 4.42	50 11 14.7
4 40 40.0	9.2	41 30.52	41 4.3	47 27.45	-22.34	+0 42.59	+ 8.64	-0.88	-17.00	4 42 12.23	50 18 39.3
4 41 15.5	8.2	42 6.12	41 53.9	31 53.85	-10.34	+0 42.59	+ 9.19	-0.88	-17.10	4 42 47.83	50 34 25.4
4 43 40.7	8.6	44 31.40	44 1.4	37 33.50	-24.39	+0 42.62	+11.16	-0.95	-17.40	4 45 13.07	52 28 33.4
4 44 39.9	5.8	45 31.36	45 3.2	26 21.45	-22.83	+0 42.62	+11.58	-0.97	-17.40	4 46 13.01	52 39 47.4
4 45 53.2	9.2	46 44.40	46 24.5	7 51.05	-16.73	+0 42.61	+ 9.46	-0.95	-17.00	4 47 26.06	50 58 22.2
4 46 50.3	9.4	47 44.50	47 10.0	52 57.95	-27.58	+0 42.63	+11.87	-1.00	-17.50	4 48 26.13	53 13 6.4
4 48 20.0	7.8	49 13.00	48 43.8	50 42.05	-23.32	+0 42.63	+12.38	-1.02	-17.50	4 49 54.61	53 15 27.0
4 49 24.4	9.2	50 19.04	49 54.7	43 0.55	-19.34	+0 42.63	+12.22	-1.04	-17.50	4 51 0.63	53 23 12.4
4 51 30.4	8.8	52 21.06	51 52.9	45 47.80	-24.02	+0 42.60	+ 8.91	-0.99	-16.70	4 53 2.67	50 20 17.9
4 52 15.0	...	53 8.66	52 54.0	2 56.60	-11.79	+0 42.63	+11.93	-1.06	-17.30	4 53 50.23	53 3 23.8

ZONE 371, JANUARY 27, 1875.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
2 56 47.7	9.0	57 31.14	57 1.4	28 28.75	-23.51	+0 43 59	+12.28	+0.28	-18.45	2 58 15.01	53 37 39.8
2 56 53.3	8.6	57 37.28	57 1.4	28 28.75	-28.42	+0 43.59	+12.17	+0.28	-18.45	2 58 21.15	53 37 34.8
4 11 5.6	8.3	11 53.60	11 16.7	22 59.60	-31.18	+0 43.61	+ 8.80	-0.56	-17.70	4 12 36.65	50 42 58.5
4 12 45.3	7.2	13 34.56	13 1.3	54 0.40	-26.62	+0 43.63	+11.67	-0.61	-18.40	4 14 17.58	53 12 4.4
4 14 5.0	8.9	14 54.42	14 26.7	58 48.75	-22.19	+0 43.63	+11.70	-0.62	-18.30	4 15 37.43	53 7 20.6
4 15 7.9	8.7	15 58.28	15 31.0	54 5.70	-21.82	+0 43.63	+11.75	-0.63	-18.30	4 16 41.28	53 12 4.1
4 15 59.2	9.0	16 47.66	16 28.1	41 35.75	-16.67	+0 43.61	+ 8.94	-0.62	-17.60	4 17 30.65	50 24 37.1
4 17 12.0	9.2	18 1.32	17 50.6	44 7.30	-10.11	+0 43.63	+10.94	-0.65	-18.10	4 18 44.30	52 22 13.6
4 17 13.1	8.8	18 3.00	17 22.9	44 7.30	-31.29	+0 43.63	+10.59	-0.65	-18.10	4 18 45.98	52 21 52.1
4 17 58.0	9.5	18 47.84	18 39.2	53 4.00	- 7.03	+0 43.63	+10.78	-0.65	-18.00	4 19 30.82	52 13 19.9
4 19 27.4	7.8	20 16.86	19 55.8	4 29.75	-17.33	+0 43.63	+10.39	-0.65	-17.95	4 20 59.84	52 1 43.5
4 20 34.4	7.0	21 24.30	20 53.8	27 50.05	-24.14	+0 43.64	+12.40	-0.70	-18.30	4 22 7.24	53 38 18.1
4 20 34.4	5.8	21 25.20	20 46.4	27 50.05	-30.70	+0 43.64	+12.24	-0.70	-18.30	4 22 8.14	53 38 11.4
4 21 59.1	7.4	22 47.92	22 23.1	34 7.35	-20.13	+0 43.63	+11.01	-0.70	-18.00	4 23 30.85	52 32 3.7
4 22 46.7	9.1	23 37.36	23 28.4	41 17.55	- 7.33	+0 43.64	+11.47	-0.71	-18.00	4 24 20.29	52 25 6.8
4 25 28.5	9.1	26 19.86	25 50.2	53 37.45	-23.74	+0 43.64	+11.82	-0.75	-18.10	4 27 2.75	53 12 30.7
4 26 33.0	9.0	27 28.28	27 3.4	20 24.45	-19.65	+0 43.65	+13.03	-0.77	-18.30	4 28 11.16	53 45 48.8
4 29 6.7	8.3	29 55.56	29 24.0	14 40.05	-26.63	+0 43.62	+ 8.84	-0.76	-17.50	4 30 38.42	50 51 22.8
4 31 7.9	9.2	31 57.18	31 36.1	16 8.55	-17.79	+0 43.62	+ 9.50	-0.78	-17.40	4 32 40.02	50 50 3.9
4 33 37.6	8.7	34 31.32	34 0.5	52 3.95	-24.61	+0 43.64	+12.07	-0.84	-18.00	4 35 14.12	53 14 3.7
4 34 31.8	8.1	35 21.64	34 58.3	33 38.80	-18.92	+0 43.64	+11.12	-0.84	-17.80	4 36 4.44	52 32 33.8
4 44 39.9	5.8	45 30.32	45 0.3	26 20.30	-24.29	+0 43.65	+11.53	-0.95	-17.50	4 46 13.02	52 39 47.6
4 45 41.3	5.0	46 33.58	46 10.6	33 17.85	-18.24	+0 43.66	+12.35	-0.98	-17.80	4 47 16.26	53 32 56.6
4 46 50.3	9.5	47 43.46	47 13.0	53 1.05	-24.38	+0 43.65	+12.07	-0.99	-17.60	4 48 26.12	53 13 7.2
4 48 20.0	8.0	49 11.90	48 38.2	50 38.90	-26.93	+0 43.65	+12.28	-1.00	-17.60	4 49 54.55	53 15 27.0
4 49 24.4	9.3	50 17.94	49 55.7	43 1.95	-17.68	+0 43.66	+12.21	-1.02	-17.70	4 51 0.58	53 23 13.1
4 51 9.0	7.8	52 1.72	51 32.8	31 51.05	-22.91	+0 43.66	+12.53	-1.04	-17.70	4 52 44.34	53 34 19.1
4 51 52.5	9.0	52 43.20	52 29.1	3 15.90	-11.84	+0 43.63	+ 9.49	-0.99	-17.20	4 53 25.84	51 3 2.7
4 53 4.1	9.0	53 53.50	53 38.7	22 6.90	-12.24	+0 43.65	+10.52	-1.01	-17.10	4 54 36.14	51 44 12.5
4 54 20.9	8.8	55 11.74	54 48.1	13 41.20	-20.31	+0 43.63	+ 7.91	-1.00	-16.60	4 55 54.37	49 52 28.0
4 54 46.9	6.0	55 35.84	54 52.6	13 41.20	-37.18	+0 43.63	+ 7.54	-1.00	-16.60	4 56 18.47	49 52 10.8

ZONE 372, JANUARY 30, 1875.

2 56 47.7	9.0	57 27.90	56 53.8	28 23.90	-27.00	+0 46.56	+11.97	+0.33	-18.70	2 58 14.79	53 37 40.2
2 56 53.3	8.5	57 34.12	56 51.0	28 23.90	-34.12	+0 46.56	+11.79	+0.33	-18.70	2 58 21.01	53 37 32.9
4 11 5.6	8.3	11 50.52	11 26.7	23 9.20	-20.11	+0 46.63	+ 8.83	-0.50	-18.00	4 12 36.65	50 42 59.3
4 12 45.3	7.2	13 31.52	12 58.3	53 58.60	-26.54	+0 46.64	+11.44	-0.54	-18.60	4 14 17.62	53 12 5.5
4 14 5.0	9.0	14 51.28	14 29.0	58 51.35	-17.86	+0 46.64	+11.54	-0.56	-18.60	4 15 37.36	53 7 21.5
4 15 7.9	8.8	15 55.08	15 26.6	54 3.25	-22.78	+0 46.64	+11.51	-0.57	-18.60	4 16 41.15	53 12 4.7
4 15 59.2	9.1	16 44.56	16 23.9	41 32.45	-17.61	+0 46.64	+ 8.79	-0.55	-17.80	4 17 30.65	50 24 38.7
4 17 12.0	9.1	17 58.14	17 43.7	44 2.45	-11.74	+0 46.66	+10.73	-0.59	-18.35	4 18 44.21	52 22 16.0
4 17 13.1	8.8	18 0.00	17 15.9	44 2.45	-35.94	+0 46.66	+10.26	-0.59	-18.35	4 18 46.07	52 21 51.3
4 17 58.0	9.2	18 44.64	18 28.1	52 54.85	-13.50	+0 46.65	+10.53	-0.59	-18.30	4 19 30.70	52 13 21.7
4 19 27.4	8.1	20 13.70	19 45.0	4 22.20	-23.57	+0 46.65	+10.12	-0.61	-18.20	4 20 59.74	52 1 43.9
4 20 34.4	7.8	21 21.24	20 47.6	27 46.50	-26.59	+0 46.66	+12.12	-0.64	-18.60	4 22 7.26	53 38 18.2
4 20 34.4	6.4	21 22.12	20 40.4	27 46.50	-33.00	+0 46.66	+11.96	-0.64	-18.60	4 22 8.14	53 38 11.7
4 21 59.1	7.2	22 44.90	22 19.3	34 5.45	-20.78	+0 46.66	+10.79	-0.64	-18.30	4 23 30.92	52 32 4.1
4 22 20.6	9.2	23 8.10	22 58.1	44 36.05	- 8.15	+0 46.58	+11.26	-0.64	-18.30	4 23 54.04	52 21 46.6
4 22 46.7	9.1	23 34.20	23 35.4	41 23.00	+ 0.98	+0 46.65	+11.26	-0.65	-18.30	4 24 20.20	52 25 8.7
4 25 28.5	8.8	26 16.64	25 43.2	53 32.20	-26.70	+0 46.65	+11.52	-0.69	-18.40	4 27 2.60	53 12 32.0

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
4 26 33.0	9.0	27 25.08	26 58.9	20 21.00	-20.68	+0 46.67	+12.76	-0.71	-18.60	4 28 11.04	53 45 50.3
4 29 6.7	7.8	29 52.38	29 30.5	14 46.50	-18.45	+0 46.65	+ 8.77	-0.70	-17.80	4 30 38.33	50 51 23.8
4 30 2.0	9.1	30 48.34	30 39.0	9 45.55	- 7.84	+0 46.65	+ 8.88	-0.71	-17.70	4 31 34.28	50 56 35.6
4 31 7.9	9.0	31 54.16	31 40.7	16 12.60	-11.38	+0 46.65	+ 9.39	-0.72	-17.70	4 32 40.09	50 50 5.5
4 33 37.6	8.5	34 28.26	34 1.7	52 5.35	-21.26	+0 46.66	+11.90	-0.78	-18.30	4 35 14.14	53 14 4.8
4 34 31.8	8.4	35 18.56	35 0.9	33 41.60	-14.37	+0 46.68	+10.99	-0.78	-18.05	4 36 4.46	52 32 34.8
4 44 39.9	6.9	45 27.26	44 42.9	26 7.05	-35.95	+0 46.69	+11.11	-0.89	-17.90	4 46 13.06	52 39 48.0
4 45 41.3	6.3	46 30.52	46 2.8	33 12.45	-21.97	+0 46.69	+11.08	-0.92	-18.10	4 47 16.29	53 32 56.4
4 46 50.3	9.5	47 40.34	47 11.8	53 0.70	-22.79	+0 46.68	+11.88	-0.93	-17.95	4 48 26.09	53 13 8.2
4 48 20.0	7.8	49 8.84	48 38.6	50 39.25	-24.13	+0 46.68	+12.08	-0.95	-17.90	4 49 54.57	53 15 28.6
4 49 24.4	9.0	50 14.90	49 45.8	42 55.05	-23.17	+0 46.70	+11.91	-0.96	-17.90	4 51 0.64	53 23 13.6
4 51 9.0	8.2	51 58.58	51 13.0	31 36.00	-36.17	+0 46.70	+12.00	-0.98	-17.90	4 52 44.30	53 34 19.7
4 51 52.5	9.3	52 40.14	52 23.3	3 11.95	-14.10	+0 46.68	+ 9.31	-0.94	-17.30	4 53 25.88	51 3 3.8
4 53 4.1	9.1	53 50.42	53 20.5	21 50.70	-24.72	+0 46.68	+10.21	-0.96	-17.40	4 54 36.14	51 44 15.2
4 53 30.2	8.0	54 16.90	54 9.2	23 1.30	- 6.36	+0 46.68	+10.40	-0.97	-17.40	4 55 2.61	51 43 23.1
4 54 20.9	9.0	55 8.56	54 56.8	13 48.40	-10.15	+0 46.68	+ 7.86	-0.95	-16.90	4 55 54.29	49 52 30.2
4 54 46.9	7.9	55 32.76	54 59.0	13 48.40	-29.08	+0 46.68	+ 7.58	-0.95	-16.90	4 56 18.49	49 52 11.0
ZONE 373, FEBRUARY 1, 1875.											
4 11 21.0	9.2	12 3.58	11 45.2	35 37.80	-15.64	+0 48.81	+10.38	-0.47	-18.30	4 12 51.92	51 30 35.7
4 14 0.5	8.9	14 47.28	14 24.7	34 39.15	-17.51	+0 48.86	+13.18	-0.52	-19.10	4 15 35.62	54 31 34.5
4 15 36.3	8.5	16 20.56	15 48.8	31 52.80	-25.89	+0 48.85	+11.23	-0.52	-18.60	4 17 8.89	52 34 11.0
4 17 12.0	9.0	17 56.30	17 41.4	44 2.15	-12.15	+0 48.84	+11.01	-0.55	-18.50	4 18 44.59	52 22 15.3
4 17 13.1	8.8	17 57.88	17 13.0	44 2.15	-36.60	+0 48.84	+10.54	-0.55	-18.50	4 18 46.17	52 21 50.4
4 18 32.9	9.0	19 19.30	18 48.1	30 32.60	-24.73	+0 48.86	+12.68	-0.57	-18.80	4 20 7.59	53 35 33.6
4 19 29.6	9.0	20 16.20	19 51.1	19 46.30	-19.81	+0 48.85	+12.24	-0.58	-18.85	4 21 4.47	53 46 24.4
4 20 11.9	8.9	21 1.00	20 44.3	34 4.00	-13.25	+0 48.86	+12.16	-0.58	-18.80	4 21 49.28	53 32 13.2
4 21 22.9	8.8	22 8.50	.....	.....	.....	+0 48.84	.....	-0.59	.....	4 22 56.75	.....
4 22 2.0	9.0	22 46.78	22 26.1	34 38.15	-16.81	+0 48.84	+10.91	-0.60	-18.50	4 23 35.02	52 31 34.5
4 22 42.1	8.9	23 27.38	23 13.9	21 15.70	-10.91	+0 48.85	+11.80	-0.61	-18.50	4 24 15.62	52 45 3.8
4 23 49.1	8.9	24 36.78	24 15.7	1 47.05	-16.52	+0 48.86	+13.13	-0.64	-18.90	4 25 25.00	54 4 27.7
4 24 38.7	8.7	25 25.98	25 9.9	20 32.70	-12.40	+0 48.87	+14.21	-0.66	-19.00	4 26 14.19	54 45 47.2
4 26 17.0	8.3	27 4.58	26 40.3	48 53.55	-18.94	+0 48.86	+12.98	-0.67	-18.90	4 27 52.77	54 17 18.7
4 27 28.2	9.0	28 12.10	27 37.0	20 31.50	-29.01	+0 48.84	+10.50	-0.65	-18.20	4 29 0.29	51 45 28.9
4 29 20.8	9.4	30 5.44	29 44.1	38 38.70	-17.72	+0 48.83	+ 9.79	-0.67	-18.10	4 30 53.60	51 27 32.4
4 30 31.3	7.0	31 17.16	30 53.7	45 42.10	-18.73	+0 48.85	+12.48	-0.71	-18.55	4 32 5.30	53 20 30.2
4 31 51.7	9.0	32 37.86	32 13.6	36 13.95	-19.30	+0 48.85	+12.38	-0.72	-18.55	4 33 25.99	53 29 57.7
4 32 40.6	8.9	33 28.50	33 12.7	48 28.90	-12.31	+0 48.87	+13.16	-0.74	-18.75	4 34 16.63	54 17 50.3
4 34 9.5	9.2	34 59.04	34 23.7	3 51.45	-27.01	+0 48.87	+13.67	-0.79	-18.90	4 35 47.12	55 2 13.4
4 44 54.6	8.8	45 40.20	45 54.6	33 51.35	+11.96	+0 48.85	+ 9.90	-0.84	-17.80	4 46 28.21	51 32 49.8
4 46 27.2	9.2	47 15.56	46 47.5	23 50.50	-22.21	+0 48.86	+12.28	-0.89	-18.30	4 48 3.53	53 42 18.4
4 49 4.7	8.0	49 53.86	49 34.5	42 45.05	-15.08	+0 48.88	+13.40	-0.94	-18.40	4 50 41.80	54 23 32.0
4 50 3.9	9.1	50 52.54	50 31.1	40 15.25	-16.62	+0 48.87	+13.82	-0.95	-18.40	4 51 40.46	54 26 0.6
4 51 27.7	7.5	52 16.72	51 48.9	22 12.35	-21.43	+0 48.88	+13.86	-0.97	-18.40	4 53 4.63	54 43 58.8
4 52 19.7	7.5	53 8.08	52 49.6	25 21.55	-14.28	+0 48.87	+14.23	-0.97	-18.40	4 53 55.98	54 40 57.1
4 53 30.2	8.8	54 14.78	53 40.7	22 39.80	-28.21	+0 48.85	+10.13	-0.94	-17.60	4 55 2.69	51 43 21.6
4 54 23.5	7.9	55 9.22	54 46.9	2 36.55	-18.71	+0 48.84	+ 9.48	-0.93	-17.45	4 55 57.13	51 3 33.9
4 55 21.8	9.3	56 8.62	55 55.6	6 15.85	-10.69	+0 48.85	+10.94	-0.96	-17.70	4 56 56.51	52 0 3.8
4 56 48.4	8.8	57 35.12	56 56.2	54 8.75	-31.83	+0 48.86	+10.32	-0.98	-17.70	4 58 23.00	52 11 49.1
4 58 26.2	8.8	59 13.00	58 33.3	57 58.85	-32.54	+0 48.85	+10.43	-1.00	-17.60	5 0 0.85	52 7 58.5
4 59 54.5	6.4	0 41.16	0 12.7	1 38.80	-22.86	+0 48.86	+11.98	-1.04	-17.80	5 1 28.98	53 4 29.6
5 1 20.4	9.0	2 9.24	1 37.1	8 31.60	-25.29	+0 48.87	+12.61	-1.07	-18.00	5 2 57.04	53 57 34.8
5 2 39.8	6.5	3 25.30	2 55.1	49 6.85	-25.22	+0 48.86	+ 9.36	-1.03	-17.25	5 4 13.13	51 16 57.1

JOURNAL OF ZONE OBSERVATIONS.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
5 4 51.4	9.2	5 39.14	5 49.3	39 39.60	+ 8.61	+0 48.85	+ 8.52	-1.03	-17.00	5 6 26.96	50 26 57.6
5 6 35.6	9.0	7 22.34	7 0.7	51 13.10	-17.65	+0 48.87	+11.17	-1.09	-17.40	5 8 10.12	52 15 0.1
ZONE 374, FEBRUARY 13, 1875.											
4 14 0.5	9.0	15 32.42	15 8.8	34 38.55	-18.29	+0 3.36	+13.13	-0.21	-19.70	4 15 35.57	54 31 35.7
4 15 36.3	8.7	17 5.66	16 29.2	31 50.05	-29.62	+0 3.33	+11.16	-0.23	-19.15	4 17 8.76	52 34 11.4
4 17 12.0	9.0	18 41.42	18 17.5	43 56.10	-19.48	+0 3.33	+10.74	-0.25	-19.10	4 18 44.50	52 22 15.1
4 17 13.1	8.9	18 43.18	17 52.0	43 56.15	-41.74	+0 3.33	+10.19	-0.25	-19.10	4 18 46.26	52 21 52.2
4 18 32.9	9.0	20 4.40	19 29.6	30 30.75	-27.57	+0 3.34	+12.62	-0.27	-19.40	4 20 7.47	53 35 34.0
4 19 29.6	8.8	21 1.22	20 33.4	19 44.15	-21.94	+0 3.34	+12.17	-0.28	-18.50	4 21 4.28	53 46 26.6
4 20 11.9	9.0	21 45.82	21 34.0	34 7.95	- 9.36	+0 3.34	+12.16	-0.29	-19.40	4 21 48.87	53 32 14.5
4 20 57.9	9.6	22 29.58	22 20.5	8 49.70	- 7.15	+0 3.36	+12.73	-0.30	-19.55	4 22 32.64	53 57 35.4
4 21 59.1	7.4	23 27.92	23 12.2	34 12.60	-12.75	+0 3.34	+11.01	-0.31	-19.05	4 23 30.95	52 32 5.7
4 22 42.1	8.4	24 12.46	24 29.2	21 42.85	+13.50	+0 3.34	+11.66	-0.32	-19.20	4 24 15.48	52 45 2.2
4 23 49.1	9.0	25 21.96	25 9.2	1 54.50	-10.03	+0 3.36	+13.20	-0.34	-19.60	4 25 24.98	54 4 28.1
4 24 38.7	8.2	26 11.20	25 53.1	20 33.20	-13.94	+0 3.37	+14.24	-0.34	-19.75	4 26 14.23	54 45 46.4
4 26 17.0	8.3	27 49.82	27 15.7	48 45.15	-26.58	+0 3.36	+12.86	-0.37	-19.60	4 27 52.81	54 17 20.6
4 27 28.2	8.8	28 57.08	28 28.2	20 36.35	-24.44	+0 3.33	+10.55	-0.38	-18.90	4 29 0.03	51 45 29.9
4 29 20.8	9.6	30 50.72	30 22.4	38 34.75	-23.54	+0 3.33	+ 9.66	-0.40	-18.80	4 30 53.65	51 27 31.6
4 30 31.3	8.0	32 2.30	31 44.5	45 48.10	-14.19	+0 3.35	+12.53	-0.42	-19.30	4 32 5.23	53 20 30.0
4 31 51.7	9.0	33 23.00	32 57.8	36 15.50	-19.94	+0 3.36	+12.52	-0.43	-19.40	4 33 25.93	53 29 56.7
4 32 40.6	8.2	34 13.46	33 59.4	48 30.90	-10.99	+0 3.37	+13.18	-0.45	-19.60	4 34 16.38	54 17 50.8
4 34 9.5	9.0	35 44.30	35 17.6	3 59.95	-20.43	+0 3.38	+13.87	-0.49	-19.80	4 35 47.19	55 2 12.8
4 44 54.6	9.0	46 25.58	46 1.4	33 19.55	-20.09	+0 3.35	+ 9.87	-0.58	-18.80	4 46 28.35	51 32 50.5
4 46 27.2	8.6	48 0.60	47 44.7	23 59.90	-12.57	+0 3.37	+12.36	-0.58	-19.30	4 48 3.39	53 42 19.7
4 49 4.7	8.0	50 39.02	50 7.4	42 37.65	-24.56	+0 3.40	+13.27	-0.66	-19.45	4 50 41.76	54 23 30.7
4 50 3.9	8.8	51 37.76	51 26.0	40 24.65	- 9.16	+0 3.40	+13.91	-0.67	-19.40	4 51 40.49	54 25 59.8
4 51 27.7	8.0	53 1.90	52 29.7	22 10.30	-24.82	+0 3.40	+13.73	-0.69	-19.50	4 53 4.61	54 43 58.2
4 52 19.7	7.9	53 53.14	53 32.0	25 19.25	-16.29	+0 3.40	+14.09	-0.69	-19.50	4 53 55.85	54 40 58.1
4 53 30.2	8.5	55 0.04	54 38.8	22 51.25	-17.54	+0 3.36	+10.19	-0.68	-18.60	4 55 2.72	51 43 21.9
4 54 23.5	8.6	55 54.36	55 35.7	2 39.55	-15.69	+0 3.35	+ 9.46	-0.68	-18.45	4 55 57.03	51 3 34.8
4 56 48.4	8.7	58 20.18	57 49.6	54 17.40	-25.04	+0 3.37	+10.39	-0.72	-18.70	4 58 22.83	52 11 48.3
4 58 26.2	8.4	59 58.20	59 32.8	58 12.80	-20.82	+0 3.39	+10.59	-0.75	-18.65	5 0 0.84	52 7 57.4
4 59 54.5	8.0	1 26.32	1 0.0	1 40.95	-21.10	+0 3.38	+11.97	-0.77	-18.90	5 1 28.93	53 4 30.1
5 1 20.4	9.0	2 54.20	2 27.2	8 37.95	-21.21	+0 3.40	+12.63	-0.81	-18.10	5 2 56.79	53 57 34.4
5 2 39.8	7.0	4 10.40	3 44.1	49 10.00	-21.96	+0 3.36	+10.37	-0.78	-18.35	5 4 12.98	51 16 59.1
5 3 36.2	8.5	5 6.46	4 48.6	55 30.90	-14.98	+0 3.36	+10.01	-0.79	-18.30	5 5 9.03	51 10 44.9
5 4 51.4	9.2	6 24.36	6 8.6	39 17.65	-13.43	+0 3.36	+ 8.47	-0.80	-18.10	5 6 26.92	50 26 58.4
5 6 35.6	9.0	8 7.66	7 37.3	51 9.00	-24.85	+0 3.38	+11.00	-0.84	-18.50	5 8 10.20	52 14 57.7
5 7 31.2	8.8	9 5.60	8 45.5	18 42.65	-15.47	+0 3.41	+13.72	-0.84	-19.20	5 9 8.17	54 47 35.5
5 8 28.5	8.3	10 2.60	9 32.9	11 11.50	-22.79	+0 3.41	+14.20	-0.91	-19.20	5 10 5.10	54 54 59.8
ZONE 375, FEBRUARY 15, 1875.											
5 9 56.0	...	11 23.72	11 26.0	51 0.15	+ 1.96	+0 5.60	+ 8.94	-0.80	-18.05	5 11 28.52	50 15 32.8
5 13 59.1	8.8	15 31.48	14 49.0	55 44.35	-34.02	+0 5.63	+11.94	-0.90	-18.80	5 15 36.21	53 10 14.9
5 15 41.5	8.5	17 12.58	16 42.9	37 31.15	-23.59	+0 5.64	+12.14	-0.92	-18.80	5 17 17.30	53 28 38.8
5 18 55.1	8.9	20 26.80	19 51.3	32 21.70	-28.15	+0 5.64	+12.29	-0.96	-18.80	5 20 31.48	53 33 43.8
5 19 54.2	8.8	21 30.46	21 1.6	25 59.80	-22.32	+0 5.66	+14.01	-1.00	-19.05	5 21 35.12	54 40 13.0
5 21 30.8	9.0	23 4.94	22 37.0	30 2.90	-21.58	+0 5.66	+14.12	-1.01	-19.00	5 23 9.59	54 36 10.8
5 22 21.1	9.4	23 55.78	23 35.7	13 33.65	-15.44	+0 5.67	+13.94	-1.03	-19.00	5 24 0.42	54 52 46.0

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	' "	"	^m ^s	"	^s	"	^h ^m ^s	[°] ' "
5 24 42.0	6.0	26 15.30	25 52.1	45 42.95	-18.05	+0 5.66	+13.72	-1.05	-18.80	5 26 19.91	54 20 34.1
5 27 12.9	9.0	28 44.50	28 11.2	36 41.45	-26.46	+0 5.65	+12.34	-1.06	-18.50	5 28 49.09	53 29 26.1
5 28 18.5	9.0	29 51.16	29 26.6	39 17.40	-19.56	+0 5.65	+11.96	-1.07	-18.20	5 29 55.74	53 26 57.0
5 29 46.7	9.5	31 17.68	30 55.6	40 6.00	-19.72	+0 5.66	+12.72	-1.08	-18.40	5 31 22.26	53 26 8.8
5 32 1.5	8.0	33 34.00	33 3.8	18 7.70	-23.24	+0 5.68	+13.76	-1.14	-18.70	5 33 38.54	54 48 4.3
5 33 12.5	8.8	34 47.88	34 27.3	23 52.60	-15.90	+0 5.69	+13.67	-1.16	-18.60	5 34 52.41	54 42 26.7
ZONE 376, FEBRUARY 18, 1875.											
5 9 56.0	9.2	11 20.10	11 10.7	50 53.25	- 8.02	+0 8.97	+ 8.97	-0.74	-18.20	5 11 28.33	50 15 29.6
5 10 29.0	...	11 56.03	12 3.5	4 34.40	+ 6.16	+0 8.98	+10.29	-0.76	-18.70	5 12 4.25	52 2 3.4
5 12 38.2	8.8	14 2.42	13 41.0	45 26.50	-18.23	+0 8.97	+ 9.10	-0.77	-18.20	5 14 10.62	50 20 46.2
5 13 59.1	9.0	15 27.74	14 52.7	55 51.20	-27.85	+0 8.98	+12.11	-0.82	-19.00	5 15 35.90	53 10 14.1
5 15 41.5	8.2	17 9.08	16 48.5	37 38.70	-16.37	+0 8.99	+12.34	-0.84	-19.05	5 17 17.23	53 28 38.3
5 16 42.2	9.2	18 9.66	17 57.5	9 44.85	- 9.59	+0 8.99	+12.63	-0.88	-19.10	5 18 17.77	53 56 39.1
5 18 55.1	8.8	20 23.22	19 55.2	32 29.15	-22.20	+0 8.99	+12.40	-0.89	-19.00	5 20 31.32	53 33 42.1
5 19 54.2	9.0	21 26.78	20 49.6	25 54.40	-28.72	+0 9.00	+13.94	-0.92	-19.30	5 21 34.86	54 40 11.6
5 21 30.8	9.5	23 1.40	22 29.6	29 59.55	-24.59	+0 9.01	+13.18	-0.94	-19.20	5 23 9.47	54 36 9.9
5 22 21.1	9.8	23 52.14	23 43.4	13 45.70	- 6.68	+0 9.02	+14.02	-0.96	-19.30	5 24 0.20	54 52 42.4
5 23 15.0	9.3	24 43.45	24 51.9	6 3.90	+ 6.83	+0 9.04	+12.18	-0.93	-18.70	5 24 51.56	53 0 36.5
5 24 42.0	6.0	26 11.74	25 50.8	45 44.90	-16.26	+0 9.01	+13.83	-0.97	-19.10	5 26 19.78	54 20 33.6
5 27 12.9	8.6	28 40.90	28 15.1	36 48.35	-20.50	+0 9.00	+12.49	-0.99	-18.80	5 28 48.91	53 29 24.9
5 28 18.5	9.0	29 47.58	29 22.9	39 17.85	-19.48	+0 9.00	+11.99	-1.00	-18.80	5 29 55.58	53 26 55.9
5 29 46.7	9.4	31 14.16	30 59.8	40 12.55	-11.45	+0 9.00	+12.84	-1.01	-18.70	5 31 22.15	53 26 10.2
5 30 34.1	8.5	32 2.80	31 51.8	39 33.30	- 8.75	+0 9.00	+12.06	-1.03	-18.70	5 32 10.77	53 26 51.4
5 32 1.5	6.5	33 30.62	33 6.0	18 11.55	-18.93	+0 9.01	+13.88	-1.06	-19.00	5 33 38.57	54 48 4.4
5 33 12.5	8.9	34 44.60	34 23.3	23 50.55	-16.43	+0 9.02	+13.70	-1.09	-18.90	5 34 52.53	54 42 27.9
5 35 15.5	9.5	36 42.06	36 16.8	41 31.45	-21.02	+0 9.00	+10.10	-1.04	-17.90	5 36 50.02	51 24 39.8
5 36 33.8	9.5	38 5.53	37 35.7	23 34.10	-23.21	+0 9.02	+13.63	-1.12	-18.85	5 38 13.43	54 42 37.5
5 38 7.6	9.2	39 37.94	39 2.0	5 30.05	-28.16	+0 9.02	+13.23	-1.13	-18.60	5 39 45.83	54 0 36.5
5 47 51.2	6.8	49 21.60	48 48.5	34 11.40	-25.64	+0 9.03	+13.23	-1.26	-18.40	5 49 29.37	54 31 57.8
5 49 15.4	9.0	50 49.05	50 20.6	33 33.55	-22.07	+0 9.03	+13.45	-1.28	-18.40	5 50 56.80	54 32 39.5
5 51 12.4	9.1	52 40.48	52 8.0	56 26.60	-26.59	+0 9.01	+ 9.72	-1.21	-17.40	5 52 48.28	51 9 39.2
5 51 39.7	9.0	53 9.54	53 30.0	21 18.45	+16.18	+0 9.02	+12.99	-1.28	-18.10	5 53 17.28	53 45 32.7
5 52 57.1	9.0	54 27.64	54 2.1	16 17.30	-20.09	+0 9.02	+13.03	-1.30	-18.00	5 54 35.36	53 49 57.7
5 55 27.2	8.7	56 58.94	56 21.8	24 17.80	-26.47	+0 9.04	+13.36	-1.35	-18.20	5 57 6.63	54 41 50.9
5 56 33.8	8.3	58 3.08	57 25.0	56 58.00	-30.58	+0 9.02	+11.82	-1.32	-17.70	5 58 10.78	53 9 5.6
5 59 8.6	8.8	0 38.66	0 10.1	35 3.80	-22.71	+0 9.03	+12.83	-1.36	-17.70	6 0 46.33	53 31 8.7
6 1 13.8	8.7	2 43.64	2 14.3	20 46.55	-23.68	+0 9.03	+11.74	-1.37	-17.40	6 2 51.30	52 45 24.2
6 1 44.3	8.2	3 13.14	3 42.7	55 36.50	+24.22	+0 9.03	+11.13	-1.36	-17.30	6 3 20.81	52 11 21.6
6 3 8.4	8.2	4 35.48	4 10.2	17 51.50	-21.35	+0 9.01	+ 9.11	-1.33	-16.80	6 4 43.16	50 48 19.5
6 4 35.9	8.7	6 5.94	5 32.8	34 55.50	-26.29	+0 9.03	+11.85	-1.42	-17.50	6 6 13.55	53 31 12.6
6 5 35.3	8.5	7 4.88	6 33.1	43 44.25	-25.84	+0 9.03	+10.72	-1.40	-17.20	6 7 12.51	52 22 23.5
6 6 40.7	9.5	8 11.18	7 57.6	34 32.20	-10.79	+0 9.04	+12.18	-1.45	-17.40	6 8 18.77	53 31 51.8
6 12 40.8	9.0	14 3.48	13 36.9	0 31.20	-22.78	+0 9.02	+ 8.72	-1.41	-16.20	6 14 11.09	50 5 38.6
ZONE 377, FEBRUARY 22, 1875.											
6 29 42.0	9.0	31 10.58	30 58.1	58 24.40	- 9.75	+0 13.24	+12.54	-1.64	-17.00	6 31 22.18	54 8 0.7
6 30 49.4	8.2	32 16.20	31 47.4	33 20.70	-22.30	+0 13.24	+12.92	-1.67	-17.00	6 32 27.77	54 32 52.3
6 31 27.9	8.9	32 55.06	32 41.4	59 49.85	-10.72	+0 13.24	+12.28	-1.66	-16.90	6 33 6.64	54 6 34.2
6 32 28.4	6.8	33 53.82	33 34.9	41 2.20	-15.04	+0 13.23	+12.12	-1.65	-16.70	6 34 5.40	53 25 17.5

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
6 33 35.1	7.8	34 59.30	34 28.3	53 38.80	-24.79	+0 13.23	+11.23	-1.65	-16.55	6 35 10.88	53 12 30.4
6 34 4.4	8.3	35 30.64	35 58.6	20 27.70	+22.09	+0 13.25	+12.56	-1.68	-16.70	6 35 42.21	53 46 29.6
6 35 19.8	9.0	36 46.04	36 33.0	52 56.10	-10.15	+0 13.25	+12.78	-1.71	-16.70	6 36 57.58	54 13 29.2
6 36 48.6	9.0	38 14.56	37 47.3	49 57.00	-21.80	+0 13.24	+11.09	-1.69	-16.40	6 38 26.11	53 16 15.2
6 38 9.4	8.7	39 37.68	39 11.9	11 59.70	-20.30	+0 13.25	+12.44	-1.73	-16.50	6 39 49.20	53 54 15.3
6 39 13.7	9.0	40 39.02	40 17.5	58 48.90	-17.23	+0 13.24	+11.21	-1.69	-16.20	6 40 50.57	53 7 28.2
6 39 41.3	9.1	41 7.94	41 28.4	46 9.00	+12.67	+0 13.25	+13.18	-1.76	-16.50	6 41 19.43	54 20 39.7
6 40 40.4	8.0	42 8.38	41 58.3	55 15.35	-7.89	+0 13.25	+13.25	-1.77	-16.45	6 42 19.86	54 11 12.9
6 42 25.9	9.0	43 51.90	43 24.4	34 3.30	-21.82	+0 13.25	+11.57	-1.76	-16.20	6 44 3.39	53 32 9.6
6 43 14.0	9.1	44 43.30	44 26.1	20 5.40	-13.25	+0 13.25	+13.95	-1.82	-16.50	6 44 54.73	54 46 18.1
6 44 55.9	9.6	46 23.03	46 53.1	30 53.80	+23.28	+0 13.26	+13.42	-1.83	-16.30	6 46 34.46	54 36 5.9
6 46 23.9	8.5	47 51.62	47 40.6	25 57.85	-8.49	+0 13.26	+13.73	-1.85	-16.30	6 48 3.03	54 40 30.4
6 47 29.4	8.5	48 55.84	48 31.1	50 10.45	-19.26	+0 13.26	+13.24	-1.85	-16.10	6 49 7.25	54 16 6.8
6 48 35.4	8.9	50 2.92	49 37.4	28 28.85	-19.71	+0 13.26	+13.05	-1.87	-16.10	6 50 14.31	54 37 47.7
6 50 44.4	9.0	52 8.54	51 44.6	55 46.05	-19.13	+0 13.25	+11.82	-1.83	-15.60	6 52 19.96	53 10 30.4
6 51 32.8	9.2	52 57.94	53 17.0	59 35.40	+15.31	+0 13.25	+11.08	-1.84	-15.60	6 53 9.35	53 7 14.7
6 54 31.2	8.8	55 57.48	55 26.1	18 8.70	-24.76	+0 13.27	+12.02	-1.89	-15.60	6 56 8.86	53 48 2.3
6 55 19.3	8.9	56 44.00	56 26.7	50 46.40	-13.82	+0 13.26	+11.99	-1.88	-15.40	6 56 55.38	53 15 35.7
6 56 9.7	9.0	57 34.96	57 13.4	26 10.10	-17.09	+0 13.27	+12.35	-1.91	-15.50	6 57 46.32	53 40 9.0
6 57 13.3	8.9	58 40.18	58 22.4	49 49.50	-14.37	+0 13.26	+11.25	-1.90	-15.30	6 58 51.54	53 16 31.4
6 58 37.7	9.0	0 5.26	59 35.4	24 41.10	-23.64	+0 13.27	+11.63	-1.94	-15.30	7 0 16.59	53 41 30.9
7 0 2.0	8.2	1 28.04	0 49.9	44 46.35	-29.65	+0 13.27	+12.41	-1.98	-15.40	7 1 39.33	54 21 20.4
7 1 0.5	9.4	2 24.24	2 5.6	56 32.75	-14.89	+0 13.26	+11.72	-1.94	-15.00	7 2 35.56	53 9 48.4
7 2 43.7	9.2	4 7.88	3 53.3	5 11.75	-11.73	+0 13.26	+11.82	-1.95	-14.90	7 4 19.19	53 1 12.8
ZONE 378, FEBRUARY 24, 1875.											
6 29 42.0	8.5	31 8.50	30 44.4	58 15.50	-18.85	+0 15.40	+12.00	-1.60	-17.20	6 31 22.30	54 8 0.8
6 30 49.4	8.4	32 14.08	31 46.7	33 22.10	-21.22	+0 15.40	+12.43	-1.63	-17.30	6 32 27.85	54 32 52.2
6 31 27.9	8.7	32 52.92	32 40.7	59 50.50	-9.55	+0 15.40	+11.81	-1.62	-17.15	6 33 6.70	54 6 35.0
6 32 28.4	6.4	33 51.76	33 28.0	40 59.00	-18.94	+0 15.40	+11.62	-1.60	-16.90	6 34 5.56	53 25 17.1
6 33 35.1	7.3	34 57.24	34 28.1	53 40.00	-23.27	+0 15.41	+10.81	-1.61	-16.80	6 35 11.04	53 12 31.1
6 34 4.4	8.6	35 28.68	35 50.5	20 23.85	+17.20	+0 15.41	+12.18	-1.64	-16.90	6 35 42.45	53 46 29.0
6 35 19.8	9.2	36 43.98	36 24.7	52 50.70	-15.06	+0 15.41	+12.28	-1.67	-17.00	6 36 57.72	54 13 29.9
6 36 48.6	9.0	38 12.40	37 40.4	49 54.35	-25.55	+0 15.41	+9.59	-1.65	-16.70	6 38 26.16	53 16 13.4
6 38 9.4	8.0	39 35.56	39 2.0	11 54.50	-26.43	+0 15.41	+10.82	-1.69	-16.80	6 39 49.28	53 54 13.4
6 43 14.0	8.8	44 41.16	44 17.5	20 0.05	-18.25	+0 15.41	+12.43	-1.78	-16.70	6 44 54.79	54 46 17.8
6 44 55.9	9.5	46 20.88	45 51.6	30 7.75	-22.66	+0 15.42	+13.10	-1.79	-16.60	6 46 34.51	54 36 6.4
6 46 23.9	9.0	47 49.52	47 17.8	25 42.30	-24.48	+0 15.42	+13.05	-1.81	-16.55	6 48 3.13	54 40 30.1
6 47 29.4	8.8	48 53.72	48 32.6	50 13.45	-16.45	+0 15.42	+12.81	-1.81	-16.40	6 49 7.33	54 16 6.9
6 48 35.4	8.8	50 0.82	49 29.2	28 23.95	-24.42	+0 15.42	+12.48	-1.83	-16.40	6 50 14.41	54 37 48.1
6 50 44.4	8.9	52 6.42	51 43.0	55 47.05	-18.73	+0 15.42	+11.42	-1.79	-15.90	6 52 20.05	53 10 30.1
6 51 32.8	9.5	52 55.78	52 43.2	59 12.30	-10.10	+0 15.42	+9.78	-1.80	-15.80	6 53 9.40	53 7 11.9
6 54 31.2	8.6	55 55.34	55 30.8	18 13.60	-19.32	+0 15.43	+11.66	-1.86	-15.80	6 56 8.91	53 48 3.3
6 55 19.3	8.8	56 41.78	56 32.1	50 52.55	-7.75	+0 15.43	+11.61	-1.85	-15.65	6 56 55.36	53 15 36.0
6 56 9.7	9.0	57 32.88	57 43.4	26 35.50	+8.31	+0 15.43	+11.94	-1.87	-15.60	6 57 46.44	53 40 9.5
6 57 13.3	8.7	58 38.00	58 27.7	49 56.30	-8.22	+0 15.43	+10.87	-1.86	-15.55	6 58 51.57	53 16 31.2
6 58 37.7	9.1	0 3.22	59 41.7	24 47.40	-17.00	+0 15.43	+11.28	-1.90	-15.60	7 0 16.75	53 41 31.6
7 0 2.0	8.6	1 25.82	1 1.1	44 59.10	-19.22	+0 15.43	+11.97	-1.95	-15.70	7 1 39.30	54 21 18.3
7 1 0.5	9.3	2 22.04	2 2.8	56 32.90	-15.37	+0 15.44	+11.31	-1.90	-15.30	7 2 35.58	53 9 48.1
7 2 43.7	9.1	4 5.72	3 48.4	5 9.55	-13.89	+0 15.44	+11.41	-1.91	-15.20	7 4 19.25	53 1 13.1
7 3 37.2	8.8	5 0.72	4 48.6	13 42.45	-9.52	+0 15.44	+11.79	-1.96	-15.30	7 5 14.20	53 52 44.9

ZONE 379, FEBRUARY 28, 1875.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
5 9 56.0	9.2	11 9.78	11 5.8	50 58.60	- 3.41	+0 19.28	+ 9.02	-0.48	-18.60	5 11 28.58	50 15 29.5
*5 12 38.2	9.0	13 51.92	13 28.9	45 29.30	-19.60	+0 19.29	+ 9.09	-0.52	-18.60	5 14 10.69	50 20 42.7
5 13 59.1	9.1	15 17.30	14 48.6	56 0.10	-22.65	+0 19.28	+12.24	-0.55	-19.50	5 15 36.03	53 10 11.1
5 15 41.5	8.8	16 58.62	16 29.0	37 33.20	-23.52	+0 19.31	+12.30	-0.58	-19.60	5 17 17.35	53 28 37.1
5 16 42.2	9.3	17 59.12	17 42.0	9 41.90	-13.44	+0 19.31	+12.61	-0.60	-19.70	5 18 17.83	53 56 38.7
5 18 55.1	8.7	20 12.70	19 55.7	32 40.25	-13.48	+0 19.30	+12.54	-0.62	-19.60	5 20 31.38	53 33 40.3
5 19 54.2	8.9	21 16.48	20 58.2	26 11.75	-14.13	+0 19.31	+14.22	-0.64	-19.90	5 21 35.15	54 40 9.6
5 21 30.8	9.4	22 51.16	22 28.2	30 9.85	-17.79	+0 19.30	+14.30	-0.66	-19.80	5 23 9.80	54 36 8.0
5 22 21.1	9.4	23 41.74	23 26.4	13 40.20	-11.75	+0 19.31	+14.02	-0.68	-19.90	5 24 0.37	54 52 43.3
5 23 15.0	9.4	24 33.20	24 26.8	5 53.05	- 5.14	+0 19.29	+12.27	-0.67	-19.30	5 24 51.82	53 0 35.9
5 24 42.0	6.2	26 1.12	25 27.8	45 36.00	-25.91	+0 19.31	+13.72	-0.71	-19.70	5 26 19.72	54 20 33.2
5 27 12.9	9.0	28 30.48	28 2.4	36 48.30	-22.32	+0 19.31	+12.45	-0.72	-19.40	5 28 49.07	53 29 23.6
5 28 18.5	9.1	29 36.96	29 7.2	39 16.55	-23.69	+0 19.32	+11.94	-0.74	-19.40	5 29 55.54	53 26 53.4
5 29 46.7	9.3	31 3.82	30 43.5	40 10.70	-16.15	+0 19.31	+12.85	-0.76	-19.30	5 31 22.37	53 26 7.8
5 30 34.1	8.5	31 52.26	31 42.0	39 34.55	- 8.19	+0 19.32	+12.05	-0.76	-19.30	5 32 10.82	53 26 51.1
5 32 1.5	7.2	33 20.04	32 52.2	18 10.90	-21.40	+0 19.31	+13.89	-0.80	-19.70	5 33 38.55	54 48 3.0
5 33 12.5	8.6	34 34.12	33 54.4	23 38.10	-30.63	+0 19.32	+13.46	-0.82	-19.65	5 34 52.62	54 42 26.2
5 35 15.5	9.5	36 31.56	36 12.2	41 34.60	-16.15	+0 19.31	+10.14	-0.80	-18.60	5 36 50.07	51 24 41.9
5 36 33.8	9.5	37 54.86	37 17.6	23 28.80	-28.61	+0 19.32	+13.55	-0.86	-19.60	5 38 13.32	54 42 37.7
5 38 7.6	9.2	39 27.24	39 2.9	5 39.40	-19.06	+0 19.31	+13.44	-0.87	-19.35	5 39 45.68	54 0 36.8
5 47 51.2	7.5	49 10.86	49 31.3	34 54.05	+15.80	+0 19.33	+13.29	-1.00	-19.05	5 49 29.19	54 31 57.1
5 49 15.4	8.8	50 38.74	50 14.2	33 37.45	-18.97	+0 19.34	+13.50	-1.02	-19.00	5 50 57.06	54 32 39.2
5 51 12.4	9.0	52 29.88	52 2.2	56 30.90	-23.19	+0 19.33	+ 9.81	-0.99	-18.20	5 52 48.22	51 9 38.6
5 51 39.7	8.9	52 59.04	52 54.2	20 59.80	- 3.79	+0 19.33	+13.18	-1.04	-18.90	5 53 17.33	53 45 31.8
5 52 57.1	9.0	54 17.14	53 43.5	16 10.75	-26.47	+0 19.34	+12.98	-1.05	-18.90	5 54 35.43	53 49 58.0
5 55 27.2	9.0	56 48.48	56 24.1	24 27.90	-18.82	+0 19.33	+13.56	-1.09	-18.90	5 57 6.72	54 41 49.1
5 56 33.8	8.3	57 52.42	57 24.9	57 7.25	-22.02	+0 19.33	+12.02	-1.08	-18.60	5 58 10.67	53 9 5.3
5 59 8.6	9.0	0 28.14	0 1.9	35 2.80	-20.79	+0 19.34	+12.13	-1.12	-18.70	6 0 46.36	53 31 11.0
6 1 13.8	8.8	2 33.04	2 2.3	20 44.75	-24.81	+0 19.35	+11.78	-1.13	-18.40	6 2 51.26	52 45 25.0
6 1 44.3	8.5	3 2.64	3 23.5	55 29.20	+17.10	+0 19.34	+11.29	-1.12	-18.20	6 3 20.86	52 11 22.1
6 3 8.4	8.5	4 25.04	4 6.6	17 56.80	-15.53	+0 19.34	+ 9.19	-1.11	-17.70	6 4 43.27	50 48 20.3
6 4 35.9	8.3	5 55.36	5 21.1	34 53.60	-27.23	+0 19.34	+11.82	-1.19	-18.50	6 6 13.51	53 31 13.6
6 5 35.3	8.4	6 54.48	6 30.8	43 48.75	-19.32	+0 19.35	+10.83	-1.17	-18.10	6 7 12.66	52 22 25.8
6 6 40.7	9.8	8 0.55	7 38.0	34 25.75	-17.85	+0 19.34	+12.09	-1.21	-18.40	6 8 18.68	53 31 51.2
6 10 1.2	6.0	11 18.38	10 52.9	35 52.60	-20.25	+0 19.35	+12.73	-1.25	-18.30	6 11 36.48	53 30 22.7
6 12 40.8	9.0	13 53.20	13 26.3	0 30.15	-23.04	+0 19.35	+ 8.73	-1.20	-17.20	6 14 11.35	50 5 39.5

ZONE 380, MARCH 4, 1875.

6 14 21.7	8.4	15 37.52	15 33.4	40 39.60	- 3.18	+0 24.06	+13.88	-1.22	-18.90	6 16 0.36	54 25 52.5
6 15 33.7	9.2	16 47.10	16 40.5	7 43.95	- 5.31	+0 24.05	+11.65	-1.20	-18.30	6 17 9.95	52 58 44.4
6 18 10.9	9.1	19 27.26	18 59.6	10 20.80	-21.77	+0 24.06	+13.13	-1.26	-18.45	6 19 50.06	53 55 52.4
6 19 29.4	8.0	20 45.64	20 22.3	14 53.45	-18.35	+0 24.06	+12.19	-1.27	-18.40	6 21 8.43	53 51 22.3
6 21 44.2	9.0	22 57.98	23 20.2	22 52.75	+17.53	+0 24.06	+12.46	-1.30	-18.30	6 23 20.74	53 43 59.3
6 23 19.9	8.0	24 35.18	24 8.0	54 52.35	-21.25	+0 24.06	+12.53	-1.33	-18.35	6 24 57.91	54 11 20.9
6 25 29.9	8.4	26 44.60	26 11.2	31 44.75	-26.48	+0 24.06	+12.32	-1.34	-18.10	6 27 7.32	53 34 23.3
6 27 18.8	9.0	28 35.94	28 16.4	4 25.20	-15.29	+0 24.07	+12.55	-1.37	-18.15	6 28 58.64	54 1 54.2
6 27 36.5	8.9	28 52.38	29 18.3	4 7.65	+20.30	+0 24.07	+12.54	-1.38	-18.15	6 29 15.07	54 2 47.4
6 29 21.8	7.5	30 34.78	30 3.3	35 43.60	-25.02	+0 24.07	+12.49	-1.38	-18.00	6 30 57.47	53 30 26.2
6 31 13.7	9.1	32 24.72	32 5.2	21 49.20	-16.47	+0 24.06	+ 9.25	-1.32	-17.00	6 32 47.46	50 44 26.9
6 34 26.0	9.2	35 40.12	35 26.5	45 7.80	-11.09	+0 24.08	+11.44	-1.40	-17.40	6 36 2.80	52 21 15.5

* 50 [20 42.7]

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
6 51 32.9	9.0	52 43.92	52 18.3	39 37.65	-21.76	+0 24.08	+ 8.20	-1.53	-16.05	6 53 6.47	50 26 33.1
6 53 45.8	9.3	55 2.80	55 28.2	15 21.90	+20.47	+0 24.10	+11.86	-1.64	-16.65	6 55 25.26	52 51 34.1
6 57 46.2	8.3	59 1.62	58 21.4	32 49.05	-30.42	+0 24.11	+13.19	-1.76	-16.90	6 59 23.97	54 33 17.2
6 58 53.8	8.4	0 8.90	59 55.0	39 0.60	-11.05	+0 24.10	+12.17	-1.72	-16.60	7 0 31.28	53 27 24.3
7 1 0.5	9.4	2 13.24	1 48.0	56 28.80	-20.17	+0 24.10	+12.00	-1.73	-16.40	7 2 35.61	53 9 47.0
7 3 4.2	9.0	4 19.44	4 14.0	18 48.25	- 4.26	+0 24.11	+12.43	-1.78	-16.40	7 4 41.77	53 47 43.9
7 6 25.8	8.8	7 38.22	7 16.0	55 35.35	-18.17	+0 24.11	+11.08	-1.75	-15.80	7 8 0.58	52 10 42.1
7 8 26.5	8.0	9 35.66	9 9.0	13 32.10	-22.97	+0 24.09	+ 7.75	-1.69	-15.00	7 9 58.06	49 52 38.0
7 10 11.2	9.0	11 25.26	10 56.9	34 9.55	-22.54	+0 24.12	+11.88	-1.84	-15.90	7 11 47.54	53 32 4.2
7 11 8.2	9.5	12 21.96	12 7.4	43 26.10	-11.63	+0 24.12	+12.00	-1.85	-15.90	7 12 44.23	53 22 58.7
7 12 39.0	9.0	13 53.62	14 10.1	16 14.05	+13.00	+0 24.12	+13.00	-1.88	-15.90	7 14 15.86	53 50 36.4
7 14 28.6	9.0	15 41.48	15 11.7	41 18.25	-23.71	+0 24.12	+12.29	-1.88	-15.55	7 16 3.72	53 24 55.1
7 15 32.4	8.7	16 45.88	16 22.2	39 1.10	-19.28	+0 24.12	+12.08	-1.90	-15.60	7 17 8.10	53 27 16.4
7 16 23.3	9.3	17 35.62	17 39.7	55 12.90	+ 3.28	+0 24.12	+12.47	-1.90	-15.50	7 17 57.84	53 11 27.7
ZONE 381, MARCH 8, 1875.											
6 50 53.2	8.0	51 58.74	51 26.5	32 45.25	-25.54	+0 28.73	+11.71	-1.53	-17.40	6 52 25.94	53 33 23.4
6 51 55.5	9.0	53 6.18	52 39.3	29 42.00	-21.31	+0 28.73	+11.45	-1.54	-17.40	6 53 33.37	53 36 30.6
6 54 31.2	8.5	55 41.86	55 5.7	18 3.00	-28.54	+0 28.73	+11.86	-1.58	-17.30	6 56 9.01	53 48 2.9
6 55 19.3	8.7	56 28.28	56 15.9	50 48.65	- 9.90	+0 28.73	+12.00	-1.57	-17.10	6 56 55.44	53 15 36.2
6 56 9.7	8.6	57 19.30	57 5.9	26 16.15	-10.60	+0 28.73	+12.37	-1.60	-17.20	6 57 46.43	53 40 8.3
6 57 13.3	8.8	58 24.42	58 2.3	49 45.25	-17.64	+0 28.73	+11.10	-1.60	-17.00	6 58 51.55	53 16 31.1
6 58 53.8	8.7	0 3.98	59 38.1	38 50.50	-20.60	+0 28.73	+11.46	-1.62	-17.00	7 0 31.09	53 27 23.3
7 0 2.0	8.4	1 12.22	0 42.0	44 52.80	-23.50	+0 28.74	+12.24	-1.67	-17.20	7 1 39.29	54 21 18.6
7 1 9.5	9.1	2 18.34	1 47.6	51 14.10	-24.52	+0 28.74	+11.70	-1.64	-16.80	7 2 45.44	53 14 56.2
7 3 4.2	8.0	4 14.52	3 47.2	18 29.40	-21.53	+0 28.74	+11.93	-1.68	-16.90	7 4 41.58	53 47 44.0
7 3 37.2	9.1	4 47.20	4 53.1	13 57.05	+ 4.64	+0 28.74	+12.12	-1.69	-16.90	7 5 14.25	53 52 42.7
7 5 17.3	8.4	6 27.12	6 15.0	36 42.40	- 9.38	+0 28.74	+13.30	-1.73	-17.00	7 6 54.13	54 29 44.4
7 6 50.4	8.8	7 57.68	7 30.5	33 52.30	-21.58	+0 28.74	+11.52	-1.71	-16.60	7 8 24.71	53 32 20.9
7 8 18.8	8.7	9 30.54	9 2.9	50 38.90	-21.52	+0 28.74	+13.09	-1.76	-16.80	7 9 57.52	54 15 35.8
7 10 11.2	9.0	11 20.48	10 46.5	34 3.50	-26.98	+0 28.74	+11.39	-1.75	-16.40	7 11 47.47	53 32 4.4
7 11 8.2	9.5	12 17.12	12 8.6	43 29.40	- 6.77	+0 28.75	+11.62	-1.76	-16.40	7 12 44.11	53 22 59.0
7 12 39.0	8.8	13 48.90	13 37.7	15 51.70	- 8.82	+0 28.75	+12.72	-1.79	-16.40	7 14 15.86	53 50 35.7
7 15 32.4	7.9	16 41.22	16 8.2	38 52.40	-26.24	+0 28.75	+11.37	-1.81	-16.15	7 17 8.16	53 27 16.5
7 16 23.3	8.7	17 30.76	17 16.0	54 51.00	-11.84	+0 28.75	+11.07	-1.81	-16.00	7 17 57.70	53 11 32.1
7 17 12.4	8.3	18 20.52	18 15.1	39 26.65	- 4.29	+0 28.75	+11.51	-1.83	-16.10	7 18 47.44	53 27 4.4
7 18 50.1	9.1	19 58.38	19 27.5	57 30.35	-24.74	+0 28.75	+11.32	-1.83	-15.85	7 20 25.30	53 8 40.3
7 20 16.2	9.1	21 25.52	20 51.3	11 51.90	-26.90	+0 28.75	+12.29	-1.88	-16.00	7 21 52.39	53 54 17.4
7 21 14.2	9.0	22 22.00	22 0.2	51 28.55	-17.42	+0 28.75	+11.78	-1.86	-15.70	7 22 48.89	53 14 50.0
7 22 46.2	8.6	23 55.26	23 28.3	15 2.10	-21.26	+0 28.76	+12.55	-1.90	-15.80	7 24 22.12	53 51 13.3
7 24 12.2	8.5	25 22.76	24 48.5	18 47.65	-26.41	+0 28.76	+13.06	-1.96	-16.00	7 25 49.56	54 47 22.9
7 25 44.2	7.0	26 53.00	26 15.6	59 12.60	-29.27	+0 28.76	+12.00	-1.95	-15.70	7 27 19.81	54 6 54.3
7 27 4.0	9.1	28 12.68	27 44.0	16 58.90	-22.08	+0 28.76	+13.47	-1.99	-15.80	7 28 39.45	54 49 16.6
7 28 25.3	8.3	29 32.42	28 58.5	22 9.20	-26.13	+0 28.76	+13.26	-2.01	-15.70	7 29 59.17	54 44 2.1
7 29 24.2	9.1	30 32.72	30 7.3	8 26.40	-20.42	+0 28.77	+11.01	-1.94	-15.20	7 30 59.55	52 57 48.9
7 30 36.3	8.6	31 47.04	31 11.9	9 50.45	-26.85	+0 28.76	+12.91	-2.04	-15.60	7 32 13.76	54 56 19.9
7 31 19.7	8.3	32 29.36	32 14.9	12 46.80	-11.13	+0 28.76	+13.56	-2.06	-15.60	7 32 56.06	54 53 39.9
7 32 44.4	9.1	33 52.90	33 25.2	33 23.20	-21.97	+0 28.77	+11.67	-1.99	-15.10	7 34 19.68	53 32 51.3
7 34 25.0	9.5	35 33.27	35 0.7	52 51.40	-26.06	+0 28.77	+11.30	-1.99	-14.90	7 36 0.05	53 13 18.8
7 37 17.3	8.7	38 25.24	37 58.2	7 59.10	-21.20	+0 28.77	+12.27	-2.06	-14.90	7 38 51.95	53 58 17.0
7 38 19.5	9.1	39 29.46	38 58.5	13 53.65	-24.40	+0 28.77	+11.90	-2.07	-14.90	7 39 56.16	53 52 18.8
7 39 40.3	6.2	40 47.60	40 14.5	39 51.80	-25.70	+0 28.77	+12.33	-2.11	-14.90	7 41 14.26	54 26 19.8
7 41 39.8	9.3	42 48.10	42 16.9	10 34.20	-24.52	+0 28.77	+12.68	-2.10	-14.65	7 43 14.77	53 55 39.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
7 43 9.5	9.2	44 17.01	43 42.4	48 7.45	-27.61	+0 28.77	+11.32	-2.09	-14.40	7 44 43.69	53 18 1.8
7 45 59.2	8.0	47 1.94	46 40.2	11 41.50	-18.66	+0 28.78	+ 7.90	-1.96	-13.30	7 47 28.76	49 54 34.3
ZONE 382, MARCH 11, 1875.											
6 50 53.2	7.8	51 55.60	51 43.6	33 2.60	- 9.52	+0 31.87	+11.60	-1.46	-17.70	6 52 26.01	53 33 22.1
6 51 55.5	9.0	53 2.98	52 40.0	29 46.65	-18.22	+0 31.87	+11.40	-1.46	-17.60	6 53 33.39	53 36 29.2
6 54 31.2	8.8	55 38.60	55 6.2	18 7.30	-25.55	+0 31.87	+11.85	-1.51	-17.60	6 56 8.96	53 48 1.7
6 55 19.3	9.1	56 25.02	56 8.1	50 45.85	-13.50	+0 31.87	+11.90	-1.51	-17.40	6 56 55.38	53 15 35.4
6 56 9.7	9.0	57 16.24	56 59.0	26 14.00	-13.61	+0 31.88	+12.29	-1.52	-17.70	6 57 46.60	53 40 7.3
6 57 13.3	8.7	58 21.28	57 59.9	49 45.75	-17.08	+0 31.86	+11.04	-1.52	-17.30	6 58 51.62	53 16 31.2
6 58 53.8	8.7	0 1.00	59 41.2	38 54.90	-15.74	+0 31.87	+11.45	-1.55	-17.30	7 0 31.32	53 27 23.8
7 0 2.0	8.4	1 9.04	0 59.7	45 10.20	- 7.25	+0 31.88	+13.40	-1.59	-17.50	7 1 39.33	54 21 18.7
7 1 9.5	9.2	2 15.34	2 0.4	51 27.90	-11.90	+0 31.86	+11.77	-1.57	-17.10	7 2 45.63	53 14 55.2
7 3 4.2	8.2	4 11.52	3 42.3	18 28.90	-23.03	+0 31.88	+11.82	-1.61	-17.20	7 4 41.79	53 47 43.0
7 3 37.2	9.0	4 44.04	4 59.5	14 3.25	+12.20	+0 31.89	+11.97	-1.62	-17.20	7 5 14.31	53 52 44.0
7 5 17.3	8.4	6 24.04	5 57.1	36 30.55	-20.85	+0 31.88	+13.11	-1.66	-17.30	7 6 54.26	54 29 44.7
7 6 50.4	8.8	7 54.54	7 27.8	33 52.45	-21.19	+0 31.89	+11.45	-1.64	-16.90	7 8 24.79	53 32 21.2
7 8 18.8	8.9	9 27.52	8 59.3	50 38.30	-21.99	+0 31.89	+12.99	-1.69	-17.10	7 9 57.72	54 15 35.9
7 10 11.2	9.2	11 17.18	11 0.5	34 16.95	-13.25	+0 31.88	+11.48	-1.68	-16.80	7 11 47.38	53 32 4.8
7 11 8.2	9.6	12 13.96	12 0.2	43 24.05	-10.99	+0 31.88	+11.53	-1.69	-16.70	7 12 44.15	53 23 0.1
7 12 39.0	9.1	13 45.78	13 20.9	15 40.30	-19.61	+0 31.89	+12.53	-1.71	-16.70	7 14 15.96	53 50 36.2
7 15 32.4	8.5	16 37.94	16 19.1	39 4.50	-14.95	+0 31.89	+11.43	-1.74	-16.50	7 17 8.09	53 27 15.8
7 16 23.3	8.8	17 27.60	17 14.1	54 52.85	-10.80	+0 31.89	+10.99	-1.73	-16.40	7 17 57.76	53 11 31.2
7 17 12.4	...	18 17.26	18 0.4	39 17.05	-13.44	+0 31.88	+11.39	-1.75	-16.40	7 18 47.39	53 27 4.8
7 18 50.1	...	19 55.20	19 26.8	57 31.50	-22.74	+0 31.89	+11.29	-1.76	-16.20	7 20 25.33	53 8 41.1
7 20 16.2	...	21 22.48	20 50.9	11 55.35	-24.86	+0 31.90	+12.24	-1.81	-16.30	7 21 52.57	53 54 16.0
7 21 14.2	...	22 18.84	21 58.5	51 29.35	-16.22	+0 31.88	+11.70	-1.79	-16.10	7 22 48.93	53 14 50.3
7 22 46.2	...	23 52.20	23 23.8	15 1.45	-22.37	+0 31.90	+11.59	-1.83	-16.20	7 24 22.27	53 51 11.9
7 24 12.2	...	25 19.70	24 45.6	18 46.90	-26.25	+0 31.91	+12.86	-1.89	-16.40	7 25 49.72	54 47 23.6
7 25 44.2	...	26 49.94	26 17.3	59 16.95	-25.51	+0 31.90	+11.98	-1.88	-16.10	7 27 19.96	54 6 53.7
7 27 4.0	...	28 9.58	27 39.1	16 56.50	-23.46	+0 31.91	+13.35	-1.92	-16.20	7 28 39.57	54 49 17.5
7 28 25.3	...	29 29.42	28 53.7	22 7.60	-27.52	+0 31.91	+13.13	-1.93	-16.10	7 29 59.40	54 44 2.2
7 29 24.2	...	30 29.58	30 8.1	8 31.15	-17.29	+0 31.90	+10.94	-1.87	-15.60	7 30 59.61	52 57 47.2
7 30 36.3	8.4	31 43.82	31 18.8	10 0.40	-19.18	+0 31.91	+12.93	-1.97	-16.00	7 32 13.76	54 56 17.6
7 31 19.7	8.8	32 26.23	32 32.6	13 4.00	+ 4.91	+0 31.91	+13.64	-1.98	-16.00	7 32 56.16	54 53 38.8
7 32 44.4	9.1	33 49.76	33 25.4	33 25.90	-19.35	+0 31.90	+11.63	-1.93	-15.50	7 34 19.73	53 32 51.2
7 34 25.0	9.3	35 29.92	34 58.5	52 53.40	-25.10	+0 31.91	+11.23	-1.93	-15.30	7 35 59.90	53 13 17.7
7 37 17.3	8.5	38 21.98	37 59.1	8 1.90	-17.99	+0 31.91	+12.23	-2.00	-15.40	7 38 51.89	53 58 17.2
7 38 19.5	9.1	39 26.26	38 55.6	13 53.35	-24.17	+0 31.92	+11.78	-2.01	-15.30	7 39 56.17	53 52 19.2
7 39 40.3	5.5	40 44.42	40 11.9	39 53.50	-25.24	+0 31.92	+12.25	-2.04	-15.35	7 41 14.30	54 26 18.4
7 41 39.8	9.2	42 45.02	42 56.3	11 8.85	+ 8.88	+0 31.91	+12.67	-2.04	-15.10	7 43 14.89	53 55 37.9
7 43 9.5	9.0	44 14.00	43 44.2	48 11.10	-23.78	+0 31.91	+11.30	-2.03	-14.80	7 44 43.88	53 18 1.9
ZONE 383, MARCH 17, 1875.											
6 14 21.7	8.4	15 24.02	15 0.0	40 23.60	-18.64	+0 37.40	+13.38	-0.86	-19.40	6 16 0.56	54 25 53.1
6 15 33.7	8.9	16 33.62	16 12.9	7 32.60	-16.64	+0 37.41	+11.23	-0.84	-19.00	6 17 10.19	52 58 44.4
6 18 10.9	9.6	19 13.72	18 58.8	10 33.45	-11.71	+0 37.40	+12.84	-0.89	-19.20	6 19 50.23	53 55 49.8
6 19 29.4	7.7	20 32.04	20 16.1	15 1.05	-12.52	+0 37.41	+11.80	-0.91	-19.20	6 21 8.54	53 51 20.4
6 21 44.2	8.6	22 44.38	22 22.8	22 20.00	-17.06	+0 37.40	+12.17	-0.93	-19.10	6 23 20.85	53 43 57.4
6 23 19.9	8.5	24 21.62	23 53.6	54 52.05	-21.88	+0 37.41	+12.07	-0.96	-19.20	6 24 58.07	54 11 20.3

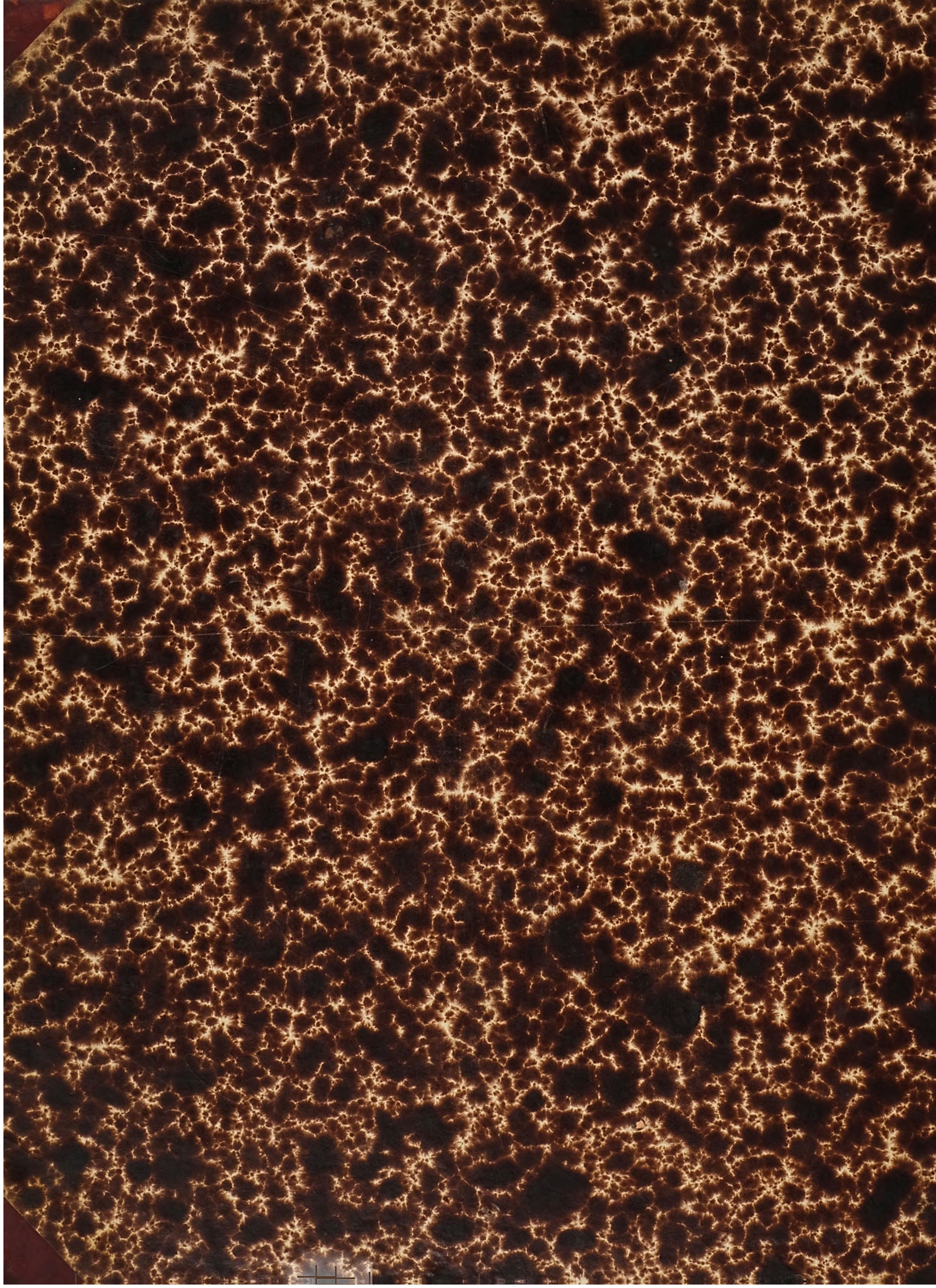
R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
6 25 29.9	8.5	26 30.96	25 59.2	31 45.80	-25.21	+0 37.40	+11.95	-0.98	-18.95	6 27 7.38	53 34 23.4
6 27 18.8	8.8	28 22.45	28 6.5	4 28.15	-12.47	+0 37.41	+12.12	-1.01	-19.00	6 28 58.85	54 1 53.9
6 27 36.5	8.8	28 38.72	29 10.9	4 12.35	+25.24	+0 37.42	+11.98	-1.02	-19.00	6 29 15.12	54 2 47.2
6 29 21.8	7.3	30 21.20	29 52.7	35 45.75	-22.63	+0 37.41	+12.14	-1.03	-18.80	6 30 57.58	53 30 26.3
6 31 13.7	9.0	32 11.08	31 42.2	21 41.05	-24.41	+0 37.42	+ 8.76	-0.99	-17.90	6 32 47.51	50 44 26.8
6 32 20.1	9.2	33 22.78	32 59.1	14 56.10	-18.22	+0 37.41	+12.97	-1.09	-19.15	6 33 59.10	54 51 20.9
6 33 34.3	8.7	34 36.36	34 16.1	7 42.45	-15.55	+0 37.42	+13.62	-1.11	-19.10	6 35 12.67	54 58 37.9
6 34 26.0	8.5	35 26.72	35 8.5	45 3.65	-14.85	+0 37.43	+10.86	-1.06	-18.30	6 36 3.09	52 21 15.4
6 35 17.9	...	36 20.77	36 19.3	25 11.15	- 1.19	+0 37.43	+12.63	-1.10	-18.70	6 36 57.10	53 41 23.0
6 51 32.9	9.0	52 30.22	52 15.9	39 48.80	-12.20	+0 37.43	+ 7.94	-1.22	-17.20	6 53 6.43	50 26 31.1
6 53 45.8	8.5	54 49.20	54 28.9	14 45.95	-16.36	+0 37.45	+10.63	-1.31	-17.80	6 55 25.34	52 51 31.9
6 55 8.4	8.0	56 11.84	55 53.8	25 55.60	-13.84	+0 37.43	+13.75	-1.38	-18.30	6 56 47.89	54 40 27.4
6 57 46.2	8.7	58 47.84	58 24.7	33 2.30	-17.89	+0 37.45	+13.02	-1.41	-18.20	6 59 23.88	54 33 16.0
6 58 53.8	8.5	59 55.32	59 38.0	38 58.10	-13.75	+0 37.44	+11.54	-1.39	-17.80	7 0 31.37	53 27 23.2
7 1 0.5	9.2	1 59.62	1 46.7	56 37.60	-10.33	+0 37.45	+11.71	-1.40	-17.70	7 2 35.67	53 9 47.4
7 2 11.4	9.1	3 11.32	2 50.8	8 31.70	-16.48	+0 37.45	+11.01	-1.41	-17.55	7 3 47.36	52 57 46.6
7 3 4.2	7.8	4 5.78	.....	.....	.....	+0 37.45	.....	-1.45	.....	7 4 41.78	.....
7 6 25.8	9.0	7 24.52	7 7.8	55 37.65	-13.67	+0 37.45	+10.80	-1.43	-17.10	7 8 0.54	52 10 43.7
7 8 26.5	8.0	9 22.08	8 56.9	13 33.15	-21.68	+0 37.46	+ 7.43	-1.39	-16.30	7 9 58.15	49 52 37.7
7 10 11.2	9.0	11 11.52	10 56.7	34 18.40	-11.74	+0 37.45	+11.59	-1.52	-17.30	7 11 47.45	53 32 5.5
7 11 8.2	9.5	12 8.20	11 51.8	43 22.95	-13.06	+0 37.46	+11.59	-1.53	-17.30	7 12 44.13	53 22 59.6
7 12 39.0	8.7	13 40.04	13 20.5	15 45.10	-15.36	+0 37.45	+12.68	-1.56	-17.30	7 14 15.93	53 50 36.3
7 14 28.6	9.0	15 27.84	15 0.2	41 19.05	-21.96	+0 37.46	+11.94	-1.56	-17.10	7 16 3.74	53 24 55.2
7 15 32.4	8.3	16 32.26	16 1.6	38 54.15	-24.41	+0 37.45	+11.40	-1.58	-17.10	7 17 8.13	53 27 17.1
7 16 23.3	8.8	17 21.94	17 12.5	54 56.05	- 7.52	+0 37.46	+11.11	-1.58	-17.00	7 17 57.82	53 11 31.9
7 17 58.3	8.5	18 54.66	18 27.9	44 26.50	-22.82	+0 37.46	+ 7.84	-1.51	-16.10	7 19 30.61	50 21 43.8
7 18 51.8	9.0	19 51.36	19 46.9	53 11.25	- 3.84	+0 37.47	+ 8.07	-1.50	-16.00	7 20 27.33	50 13 18.3
7 19 37.5	7.5	20 33.76	20 28.9	54 48.65	- 4.36	+0 37.46	+ 7.72	-1.52	-15.90	7 21 9.70	50 11 40.2
7 20 36.4	9.2	21 37.66	21 57.8	14 51.75	+15.82	+0 37.47	+11.83	-1.66	-17.00	7 22 13.47	53 52 0.3

ZONE 384, MARCH 18, 1875.

6 14 21.7	9.0	15 22.84	15 4.2	40 29.00	-14.44	+0 38.47	+13.62	-0.82	-19.50	6 16 0.49	54 25 51.5
6 15 33.7	9.3	16 32.40	16 17.7	7 39.35	-11.81	+0 38.46	+11.46	-0.81	-19.00	6 17 10.05	52 58 42.1
6 19 29.4	7.7	20 30.86	20 18.3	15 2.05	- 9.92	+0 38.47	+12.26	-0.88	-19.20	6 21 8.45	53 51 21.9
6 21 44.2	9.0	22 43.18	22 23.4	22 20.75	-15.64	+0 38.48	+12.38	-0.91	-19.10	6 23 20.75	53 43 57.7
6 23 19.9	8.1	24 20.50	23 58.3	54 56.90	-17.34	+0 38.48	+12.39	-0.93	-19.20	6 24 58.05	54 11 19.8
6 25 29.9	8.2	26 29.90	26 8.0	31 53.30	-17.36	+0 38.48	+12.27	-0.95	-19.00	6 27 7.43	53 34 23.4
6 27 18.8	8.8	28 21.40	27 58.2	4 21.60	-18.19	+0 38.49	+12.34	-0.98	-19.10	6 28 58.91	54 1 54.3
6 27 36.5	8.8	28 37.68	28 48.5	3 55.50	+ 8.46	+0 38.49	+12.54	-0.99	-19.10	6 29 15.18	54 2 47.2
6 29 21.8	7.7	30 20.10	29 52.3	35 45.45	-22.08	+0 38.49	+12.35	-1.00	-18.90	6 30 57.59	53 30 26.7
6 31 13.7	9.0	32 10.08	31 52.8	21 51.40	-14.61	+0 38.47	+ 9.06	-0.97	-17.95	6 32 47.58	50 44 25.9
6 32 20.1	8.9	33 21.66	32 59.7	14 58.35	-16.91	+0 38.49	+13.22	-1.06	-19.20	6 33 59.09	54 51 19.6
6 33 34.3	8.7	34 35.08	34 15.4	7 42.50	-15.09	+0 38.49	+13.86	-1.08	-19.20	6 35 12.49	54 58 37.9
6 34 26.0	8.7	35 25.58	35 11.5	45 6.35	-11.50	+0 38.50	+11.29	-1.04	-18.40	6 36 3.04	52 21 15.9
6 35 17.9	8.6	36 19.44	36 41.5	25 26.90	+17.47	+0 38.59	+12.71	-1.08	-18.70	6 36 56.95	53 41 25.4
6 51 32.9	8.8	52 29.14	52 13.6	39 46.70	-13.18	+0 38.49	+ 8.13	-1.19	-17.20	6 53 6.44	50 26 31.9
6 53 45.8	9.1	54 48.20	54 21.0	14 38.90	-21.92	+0 38.52	+10.81	-1.28	-17.90	6 55 25.44	52 51 32.9
6 55 19.1	8.5	56 21.82	56 11.7	20 23.90	- 7.78	+0 38.52	+14.14	-1.35	-18.50	6 56 58.99	54 46 4.8
6 57 46.2	8.6	58 46.78	58 22.8	33 1.85	-18.58	+0 38.52	+13.25	-1.38	-18.30	6 59 23.92	54 33 15.3
6 58 53.8	8.5	59 54.12	59 28.1	38 50.55	-20.67	+0 38.52	+11.69	-1.36	-17.90	7 0 31.28	53 27 23.4
7 1 0.5	9.3	1 58.50	1 40.1	56 32.80	-14.73	+0 38.51	+11.90	-1.38	-17.70	7 2 35.63	53 9 47.5
7 2 11.4	9.2	3 10.20	2 47.7	8 30.80	-18.09	+0 38.53	+11.22	-1.37	-17.60	7 3 47.36	52 57 45.6
7 3 4.2	8.0	4 4.56	3 47.8	18 38.30	-13.25	+0 38.53	+12.25	-1.42	-17.80	7 4 41.67	53 47 43.7

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
7 3 5.9	9.0	4 5.42	4 21.3	17 45.55	+12.53	+0 38.53	+12.46	-1.42	-17.80	7 4 42.53	53 49 2.5
7 6 25.8	8.8	7 23.48	7 5.6	55 37.90	-14.65	+0 38.53	+10.97	-1.41	-17.20	7 8 0.60	52 10 42.0
7 8 26.5	8.7	9 20.98	8 55.0	13 31.95	-22.37	+0 38.51	+ 7.60	-1.37	-16.40	7 9 58.12	49 52 37.7
7 10 11.2	9.1	11 10.44	11 3.0	34 24.05	- 5.87	+0 38.53	+12.06	-1.49	-17.40	7 11 47.48	53 32 5.6
7 11 8.2	9.7	12 6.96	11 57.4	43 29.25	- 7.49	+0 38.53	+11.84	-1.50	-17.40	7 12 43.99	53 22 58.5
7 12 39.0	9.0	13 38.96	13 24.2	15 48.70	-11.66	+0 38.53	+12.89	-1.53	-17.40	7 14 15.96	53 50 36.0
7 14 28.6	9.0	15 26.86	15 4.5	41 24.10	-17.82	+0 38.53	+12.19	-1.55	-17.20	7 16 3.84	53 24 53.9
7 15 32.4	8.3	16 31.22	16 10.1	39 2.10	-16.78	+0 38.53	+11.72	-1.56	-17.20	7 17 8.19	53 27 16.5
7 16 23.3	9.2	17 20.84	17 11.3	54 56.40	- 7.60	+0 38.53	+11.33	-1.56	-17.10	7 17 57.81	53 11 31.0
7 17 58.3	8.6	18 53.46	18 30.5	44 30.35	-19.59	+0 38.52	+ 8.03	-1.48	-16.10	7 19 30.50	50 21 42.8
7 18 51.8	9.0	19 50.18	19 58.9	53 24.30	+ 7.44	+0 38.52	+ 8.18	-1.49	-16.05	7 20 27.21	50 13 16.1
7 19 37.5	7.5	20 32.48	20 22.0	54 43.40	- 8.97	+0 38.52	+ 7.90	-1.50	-16.00	7 21 9.50	50 11 40.4
7 20 36.4	9.6	21 36.58	21 30.0	14 32.25	- 5.20	+0 38.54	+12.23	-1.63	-17.10	7 22 13.49	53 51 58.5
ZONE 385, MARCH 23, 1875.											
7 48 29.0	7.8	49 16.14	48 44.8	25 24.65	-26.48	+0 44.97	+ 9.30	-1.69	-15.20	7 49 59.42	50 40 44.1
7 49 48.3	7.0	50 39.88	50 15.7	18 20.70	-18.62	+0 44.97	+13.71	-1.87	-16.30	7 51 22.98	54 47 59.2
7 51 10.3	9.0	52 0.86	51 31.9	16 35.25	-22.30	+0 44.98	+14.01	-1.89	-16.20	7 52 43.95	54 49 41.4
7 52 13.4	9.0	53 3.26	52 38.2	35 58.80	-19.46	+0 44.98	+13.77	-1.89	-16.10	7 53 46.35	54 30 20.5
7 54 31.3	9.5	55 21.42	55 0.2	11 37.95	-17.07	+0 44.98	+11.84	-1.84	-15.50	7 56 4.56	52 54 42.4
7 55 45.8	8.5	56 37.24	56 16.3	37 54.55	-16.22	+0 44.98	+13.45	-1.93	-15.90	7 57 20.29	54 28 27.9
7 57 18.1	7.5	58 2.80	57 32.7	36 31.80	-25.56	+0 44.98	+ 8.80	-1.77	-14.65	7 58 46.01	50 29 37.9
7 58 25.9	8.6	59 12.84	58 46.2	48 24.70	-22.21	+0 44.98	+ 9.52	-1.82	-14.80	7 59 56.00	51 17 48.9
8 0 22.0	7.6	1 8.24	0 38.2	42 33.55	-24.44	+0 44.99	+10.93	-1.88	-15.00	8 1 51.35	52 23 39.0
8 0 54.9	8.4	1 40.68	1 31.8	58 22.00	- 7.29	+0 44.99	+10.68	-1.88	-14.90	8 2 23.79	52 8 7.6
8 2 29.1	9.3	3 18.42	2 48.3	27 57.95	-23.83	+0 44.99	+12.29	-1.96	-15.20	8 4 1.45	53 38 16.4
8 3 52.2	8.7	4 38.92	4 7.2	47 14.25	-25.28	+0 44.98	+12.05	-1.96	-15.10	8 5 21.94	53 18 58.5
8 4 28.2	8.2	5 16.08	5 1.8	27 50.90	-11.32	+0 44.99	+12.52	-1.98	-15.10	8 5 59.09	53 38 36.3
8 6 21.9	8.3	7 9.32	6 51.2	47 54.30	-14.44	+0 44.98	+12.10	-1.99	-14.90	8 7 52.31	53 18 29.6
8 7 6.2	6.7	7 54.50	7 38.5	34 47.90	-12.39	+0 44.99	+13.19	-2.05	-15.20	8 8 37.44	54 31 38.8
8 8 14.4	9.5	9 2.50	8 42.3	36 47.25	-15.66	+0 45.00	+13.69	-2.07	-15.10	8 9 45.43	54 29 36.8
8 9 3.8	8.0	9 47.66	9 29.3	26 28.80	-15.57	+0 45.00	+ 9.26	-1.90	-14.00	8 10 30.76	50 39 52.0
8 11 15.2	9.0	12 5.62	11 31.8	17 37.30	-26.00	+0 45.00	+13.75	-2.11	-15.00	8 12 48.51	54 48 36.6
8 12 29.8	8.8	13 14.84	12 45.8	34 14.60	-24.61	+0 45.00	+ 8.46	-1.93	-13.70	8 13 57.91	50 31 56.7
8 13 32.8	8.8	14 16.40	13 46.1	31 49.35	-25.70	+0 45.00	+ 8.92	-1.94	-13.70	8 14 59.46	50 34 21.3
8 14 16.9	9.0	15 5.92	14 47.3	41 39.40	-14.45	+0 45.00	+13.64	-2.12	-14.70	8 15 48.80	54 24 46.2
8 15 58.9	7.1	16 46.78	16 16.8	4 6.05	-23.52	+0 45.01	+12.55	-2.12	-14.50	8 17 29.67	54 2 9.6
8 17 10.9	9.1	17 56.00	17 34.1	53 53.50	-18.72	+0 45.00	+ 8.21	-1.96	-13.30	8 18 39.04	50 12 23.8
8 18 39.0	8.5	19 22.88	19 1.4	15 28.30	-18.12	+0 45.01	+ 9.62	-2.00	-13.40	8 20 5.89	50 50 50.9
8 19 33.7	6.2	20 20.58	19 51.2	34 18.45	-22.78	+0 45.02	+13.14	-2.20	-14.40	8 21 3.40	54 31 58.6
8 20 42.3	8.6	21 31.84	21 4.8	7 29.00	-21.21	+0 45.02	+12.83	-2.17	-14.20	8 22 14.69	53 58 49.5
8 22 52.6	8.8	23 40.54	23 11.2	39 50.60	-24.39	+0 45.02	+ 9.38	-2.07	-13.30	8 24 23.49	51 26 22.2
8 24 27.1	9.3	25 12.88	24 49.1	59 47.60	-19.95	+0 45.02	+ 9.11	-2.07	-13.10	8 25 55.83	51 6 29.6
8 24 52.2	7.5	25 38.50	25 41.3	57 31.60	+ 2.19	+0 45.02	+13.24	-2.22	-13.95	8 26 21.30	54 9 11.0
8 26 42.0	9.4	27 30.72	27 3.5	52 56.90	-21.23	+0 45.02	+13.05	-2.24	-13.80	8 28 13.50	54 13 22.2
8 27 46.1	8.5	28 33.74	28 4.6	56 54.30	-22.75	+0 45.03	+13.13	-2.26	-13.80	8 29 16.51	54 9 23.4
8 28 34.7	9.7	29 23.48	29 6.0	37 27.30	-13.57	+0 45.03	+13.59	-2.28	-13.80	8 30 6.23	54 29 0.0
8 29 49.8	9.2	30 38.60	30 11.9	32 7.60	-21.17	+0 45.03	+12.45	-2.24	-13.40	8 31 21.39	53 34 11.4
8 30 37.5	9.0	31 25.96	31 7.5	58 5.05	-14.48	+0 45.03	+13.01	-2.28	-13.50	8 32 8.71	54 8 21.1
8 32 40.1	8.3	33 22.98	32 43.7	39 57.05	-33.42	+0 45.02	+ 8.01	-2.11	-12.40	8 34 5.89	50 26 6.2
8 34 55.9	8.6	35 41.22	35 2.5	58 19.95	-31.00	+0 45.02	+11.52	-2.26	-13.00	8 36 23.98	53 7 48.7
8 35 55.8	8.7	36 40.06	36 11.5	36 18.15	-22.71	+0 45.03	+12.50	-2.30	-13.00	8 37 22.79	53 29 59.8
8 36 59.2	8.5	37 44.78	37 28.2	15 21.65	-12.76	+0 45.03	+14.45	-2.39	-13.30	8 38 27.42	54 51 7.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
8 38 40.6	8.6	39 25.52	38 55.6	32 29.10	-23.14	+0 45.04	+13.54	-2.39	-13.10	8 40 8.17	54 33 49.3
8 39 26.0	9.4	40 12.82	39 52.4	48 21.35	-15.89	+0 45.04	+13.18	-2.38	-12.90	8 40 55.48	54 18 4.2
8 41 9.9	9.0	41 55.88	41 16.7	7 26.70	-31.51	+0 45.03	+11.50	-2.32	-12.50	8 42 38.59	52 58 41.9
8 42 35.8	8.2	43 22.62	42 51.6	54 0.65	-24.21	+0 45.04	+12.78	-2.40	-12.70	8 44 5.26	54 12 16.3
8 43 24.7	8.4	44 13.34	43 52.7	19 31.30	-15.86	+0 45.04	+13.54	-2.44	-12.80	8 44 55.94	54 46 54.7
8 44 33.2	8.5	45 15.46	44 43.5	22 27.90	-27.04	+0 45.04	+ 8.99	-2.23	-11.60	8 45 58.27	50 43 43.6
8 45 25.8	8.6	46 7.78	45 45.1	47 33.55	-19.35	+0 45.03	+ 8.61	-2.22	-11.40	8 46 50.59	50 18 45.4
8 47 53.5	9.0	48 37.80	48 8.9	30 48.05	-22.36	+0 45.05	+13.89	-2.47	-12.40	8 49 20.38	54 35 32.2
8 49 20.0	7.8	50 5.26	49 32.4	50 33.30	-25.65	+0 45.05	+13.49	-2.46	-12.95	8 50 47.85	54 15 42.7



Rogers, William Augustus

Journal of the zone observations of Stars between 49o 50' and 55o 10' of North Declination in 1855.o and Observed with the Meridian Circle during the Years 1870 to 1875, under the dir. of Joseph Winlock and Edward C. Pickering

Waterville 1894

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